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REPORT NO. 1199
MARCH 1963

NEUTRON REFLECTION AND FLUX VERSUS DEPTH FOR IRON

Frank J. Allen
Arnold Futterer
William Wright

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RDT & E Project No. 1A022601A088
BALLISTIC RESEARCH LABORATORIES

ABERDEEN PROVING GROUND, MARYLAND

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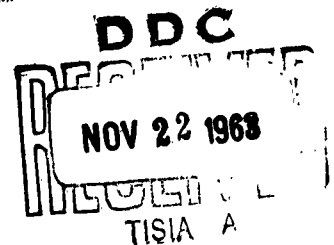
by

Frank J. Allen
Arnold Futterer
William Wright - March 1963

For each odd page from 55 to 97 inclusive, except page 95, move the decimal point one place to the right for each of the following entries:

- a. SCAT.EGY. - seventh (last) entry on third row of entries from TR AN.FACT. bottom
- b. ENERGY - fourth entry on second row of entries from bottom REFL.FACT.
- c. MEAN ENERGY - first entry, bottom row SCAT.TR.WT.
- d. MEAN ENERGY - second (last) entry, bottom row REFL.WT.

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MARCH 1963

NEUTRON REFLECTION AND FLUX VERSUS DEPTH FOR IRON

Frank J. Allen
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Terminal Ballistics Laboratory

Funded Under DASA NWER Sub-Task 11.001

RDT & E Project No. 1A022601A088

ABERDEEN PROVING GROUND, MARYLAND

FOREWORD

This is the third of a series of reports, each one of which presents calculated results for neutron reflection and flux versus depth for a single material. The first report, BRL 1189, gives the results for concrete. The second report, BRL 1190, contains the results for Nevada Test Site soil dry, 50 percent saturated, and 100 percent saturated. The present report contains the calculated results for iron. The next report will treat water. For each material eight incident energies: 0.1, 0.25, 0.5, 1.0, 2.0, 3.0, 5.0, and 14.0 MEV and four incident angles for each energy: 0, 30, 45 and 70° are considered.

BALLISTIC RESEARCH LABORATORIES

REPORT NO. 1199

FJAllen/AFutterer/WWright/bj
Aberdeen Proving Ground, Md.
March 1963

NEUTRON REFLECTION AND FLUX VERSUS DEPTH FOR IRON

ABSTRACT

Detailed calculated results on neutron reflection and flux versus depth for iron are given in the form of machine printouts. The angular and energy distributions of the reflected neutrons along with the energy-dependent and total flux at various depths are contained in tabular form on the printouts. Neutron number current, number flux and dose transmission as functions of thickness are also given in tabular form on the printouts.

A table of summary information on reflection is presented. This contains number current, number flux, dose and energy reflection factors as functions of incident energy and angle.

A few figures are presented to illustrate graphically the meaning of the various tabular results.

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INTRODUCTION

A systematic study of neutron transport in common materials is in progress at the Ballistic Research Laboratories. Primary emphasis has been placed upon the dose transmitted through various thicknesses of these materials when monoenergetic neutrons strike a laterally infinite slab, not necessarily homogeneous, at a fixed angle of incidence. The principal results are given in Reference 1.

The Monte Carlo machine program which calculates these results also calculates a multitude of other results such as number current, number flux, dose, and energy reflection and transmission; reflected and transmitted angular and energy distributions; and energy-dependent and total flux versus depth. Only a small fraction of this information has been reported previously in conjunction with the dose transmission results. A series of reports presenting this information is in preparation. The first two reports of the series, References 3 and 4, present the results for concrete and Nevada Test Site Soil. The present report, the third in the series, gives similar results for iron.

The reason for tabular presentation of the detailed results is simply that a much larger number of pages would be required to display equivalent information graphically. The gross results for the reflection of neutrons from iron are given in a single table discussed in the following section.

SUMMARY DATA ON REFLECTION

Table I gives the number current, number flux, energy, and dose reflection factors (albedos) for eight incident energies and four incident angles. "Flux" and "factor" are defined in the next section. The slab thickness for which the entries in Table I are calculated is 12 inches. This thickness is sufficiently great so that the results differ imperceptibly from the corresponding results for slabs of infinite thickness.

A neutron cutoff energy of 10 electron volts was used for all of the calculations. Below this energy neutron trajectories were no longer followed in the machine program.

DESCRIPTION OF MACHINE PRINTOUTS

Two distinct types of machine printout are included in this report. For each incident neutron energy and angle, there are two printouts and these are placed side by side. We now describe the meaning of the information on the two types of printout, denoting them by Type 1 and Type 2. Although the actual printout sheets are not so labelled, no difficulty will be experienced in distinguishing between the two.

A. Description of Type 1 Printout

The problem calculated is defined by the fifth line of the machine printout, which gives the slab configuration, and the first two numbers of the fourth line, which give the neutron's incident energy (in MEV) and the cosine of the angle between the incident direction and the slab normal. The third number in the fourth line is the energy cutoff, that energy (in MEV) below which neutron trajectories are no longer traced in the Monte Carlo program. On the second line of the machine printout, the first two numbers are the run number, used for indexing purposes, and the number of neutron histories used in the Monte Carlo program. The fifth number in the second line is the number of mean free paths the incident neutron would have to traverse to emerge from the rear face of the slab without having suffered an interaction.

The third and fourth numbers on the second line designate the set of energy intervals and angular intervals, respectively, which are used in the calculation. A transmitted or reflected neutron emerges from the slab with a definite energy and direction; this precise information would be very difficult to utilize. Therefore, a set of energy and angular intervals are utilized and the emergent neutron is placed in the appropriate interval. Several energy "sets" have been used. The energy intervals, of which the various sets are composed, are shown in Table II. The sets are designed to make full use of the ten energy intervals available in the machine program for all source energies. Thus the intervals used must vary with the source energy. The scheme devised was that of refining the remaining upper energy intervals when decrease of the source energy makes the highest energy interval in a given set devoid of neutrons. This method provides the most detailed spectral

information at the highest available emergent neutron energies, that is, in the most important part of the spectrum. At the same time, the lower energy intervals are constant from set to set (the sets are ordered: 2, 2A, ..., 2E), thus allowing intercomparison as the source energy is changed.

Tables IV and V and the diagram accompanying Table V show the angular intervals which have been used. θ_1 , θ_2 , ϕ_1 , and ϕ_2 are the end points of the angular intervals shown in these tables. The θ 2541 histogram has been used for normally incident neutrons, the $\theta\phi$ histogram for slant incident neutrons.

The seventh and eighth lines of the ORDVAC printout give the position in centimeters of internal interfaces which subdivide the slab into eight regions. They are used by the Monte Carlo transport code to provide a spatial breakdown of certain events which take place within the slab.

The remaining entries on the Type 1 machine printouts are explained with the aid of the following notation.

Let T_{ij} = fraction of neutrons transmitted into the i^{th} energy group and j^{th} angular sector.

R_{ij} = fraction of neutrons reflected into the i^{th} energy group and j^{th} angular sector.

D_i = flux-to-dose conversion factor for i^{th} energy group (see Table II).

D_E = flux-to-dose conversion factor for source energy (see Table III).

Ω_j = number of steradians in j^{th} angular sector (see Tables IV and V).

θ = angle of incident neutrons with respect to slab normal.

$\overline{\text{Sec } \theta_j}$ = mean value of secant for neutrons in the j^{th} angular sector; actually the secant of the mean angle is used.

Subscripts i and j refer to the i^{th} energy group and j^{th} angular sector, respectively.

The flux-to-dose conversion factors in Tables II and III are based on Reference 2.

Then, F = incident flux per neutron = $\text{Sec } \theta$

D = incident dose per neutron = $D_E \text{ Sec } \theta$.

The quantities in the table "Number of Scattered Neutrons vs. Energy" are then given by:

$$(\text{Number Transmission Factor})_i = \sum_{j=1}^{12} T_{ij} \quad i = 1, 2, \dots, 10$$

$$(\text{Number Flux Transmission Factor})_i = \frac{1}{F} \sum_{j=1}^{12} T_{ij} \overline{\text{Sec } \theta_j} \quad i = 1, 2, \dots, 10$$

$$(\text{Dose Transmission Factor})_i = \frac{D_i}{D} \sum_{j=1}^{12} T_{ij} \overline{\text{Sec } \theta_j} \quad i = 1, 2, \dots, 10$$

The corresponding quantities for the reflected neutrons are obtained by replacing T_{ij} by R_{ij} .

The quantities in the table "Number of Scattered Neutrons vs. Angle" are given by:

$$(\text{Number Transmission Factor})_j = \sum_{i=1}^{10} T_{ij} \quad j = 1, 2, \dots, 12$$

$$(\text{Number Transmission Factor/Steradian})_j = \frac{1}{\Omega_j} \sum_{i=1}^{10} T_{ij} \quad j = 1, 2, \dots, 12$$

$$(\text{Dose Transmission Factor/Steradian})_j = \frac{\overline{\text{Sec } \theta_j}}{D \Omega_j} \sum_{i=1}^{10} T_{ij} D_i \quad j = 1, 2, \dots, 12$$

The corresponding quantities for the reflected neutrons are again obtained by replacing T_{ij} by R_{ij} .

The quantities listed on the lines following the table "Number of Scattered Neutrons vs Angle" are all defined when the word "Factor" is defined. Wherever the word "Factor" is used, the operation of dividing the quantity in question by the corresponding incident quantity is implied.

The final two quantities listed are not fractions, but are the mean energy of the scattered transmitted neutrons and of the reflected neutrons.

Table VI is a list of abbreviations used on both the Type 1 and Type 2 machine printouts. It is believed that the abbreviations used will quickly become clear so that constant reference to the list will not be necessary.

B. Description of Type 2 Printout

The entries in the top three lines are identical to some of the entries previously defined for the Type 1 printout; they serve to identify the problem.

Fluxes and doses are defined as before. Note, however, that the word "factor" is not used on the Type 2 printout. All entries on this printout are given on a per incident neutron basis. That is, the phrase "per neutron" (or the abbreviation "per NT") on this printout means "per incident neutron."

The first two tables on this printout are the fluxes broken down into ten energy groups. The energy interval spanned by each group is given in Table II; the last entry in the second row of the printout specifies the relevant energy set in Table II.

The first table, "Scattered Flux per Neutron at Region Boundaries in Energy Groups," gives the energy-dependent fluxes due to scattered neutrons (uncollided excluded) at what are termed "region boundaries." The slab configuration through which the machine program traces neutron trajectories is divided into eight sub-slabs by means of seven interior interfaces. Each time a neutron crosses such an interface its contribution to the flux (in the energy interval appropriate for the crossing in question) is recorded. A neutron may cross an interior interface any number of times. Generally speaking, however, once a neutron gets more than a few inches from a given interface, it seldom recrosses that interface. Thus, for most of the interior interfaces the number of recrossings is approximately the same as would take place in the interior of a semi-infinite medium of the same material.

In the Type 2 printout all fluxes (and doses) calculated except those in the first row of entries of the first table "Scattered Flux per Neutron at Region Boundaries in Energy Groups" involve the secants of the actual angles at which the neutrons cross the various interfaces, except that for angles whose secant is greater than eight, the value eight is substituted for the secant. In the first row of entries of the first table, and in all cases on the Type 1 printout, the fluxes and doses calculated are based on an average value of the secant for each of the angular regions into which neutrons are grouped. The Type 1 printout fluxes are usually about 3 or 4 percent higher than the Type 2, the value depending on the actual angular distribution. (This is apart from the difference between "Flux Transmission or Reflection Factor" and "Flux Transmitted or Reflected per incident neutron" in accordance with the previously given definitions of these terms). It is readily shown* that the fluxes calculated with the greatest value of the secant limited to eight are, on the average, six percent low for an isotropic distribution; the error is smaller for a distribution which is peaked forward (which is almost always the case for transmitted neutrons). Thus fluxes and doses listed on the Type 2 printouts average about 4 to 6 percent low, while those on the Type 1 printout average 1 or 2 percent low.

The second table, "Scattered Flux Transmitted per Neutron in Energy Groups Versus Thickness," again contains the energy-dependent fluxes, but this time only a neutron's first crossing of an interface is tallied. Thus, for example, the entries in the 4 inch row (left hand or index column reads 4 inches) for a 12 inch thick slab constitute the energy-dependent fluxes which would be transmitted per incident neutron by a 4 inch thick slab - just as though the slab being treated in the machine program were only 4 inches thick. This method allows the calculation of eight problems simultaneously.

* The authors are indebted to Dr. M. Kalos, United Nuclear Corporation, for this demonstration.

In the third or bottom table in the printout, the entries are not broken down by energy groups. The first four columns contain information similar to that in the immediately preceding paragraph: each row corresponds to a slab whose thickness is specified in the index column, the remaining thickness of the slab actually treated having no effect on the table entries. Each column in this table bears its own heading. The first column represents the number (we use this interchangeably with the term number current) transmitted per incident neutron, including the uncollided. The second and third columns are the flux and dose per incident neutron, again including the uncollided. The fourth column gives the uncollided contribution to the flux per incident neutron.* The uncollided contribution to the number current is obtained from the entries in this column upon dividing by the secant of the incident angle; the uncollided contribution to the dose is obtained upon multiplication of the entries by the flux-to-dose conversion factor at the source energy from Table III. (The machine program interpolates in a table in obtaining source energy flux-to-dose conversion factors.)

The final column in the bottom table provides information analogous to that in the first table, i.e., the result of every crossing of an interface by each neutron is contained therein. The uncollided contribution is also included here. Thus, the second and fifth columns of the bottom table represent a total over all energy groups (plus the uncollided) of the flux due to neutrons' first crossings of the various interfaces, and due to all crossings of the interfaces, respectively. The difference represents the effect of crossings other than the first.

In the first and third tables of the Type 2 printout, the first row of entries corresponds to zero inches, i.e., the incident face, the machine suppressing the zero. Since the first table refers to scattered neutrons only, the first row entries in this table are due solely to reflected neutrons. The

* At each interface, the uncollided flux in this column is based on an integral number of neutrons (or zero). This does not affect any other entries on the printout.

first four columns of the third table refer to transmitted neutrons, so reflected neutrons are not included at the incident face (first row entries). The entry in the first row of the final column of the bottom table represents the sum of the fluxes due to the incident neutrons and the reflected neutrons.

DISCUSSION

The machine printouts are arranged in order of increasing energy; for each energy, they are arranged in order of increasing angle with respect to the slab normal. The incident energies (in MEV) for which results are given are: 0.1, 0.25, 0.5, 1.0, 2.0, 3.0, 5.0, and 14.0. The incident angles (degrees) are: 0, 30, 45, 70.

Figures 1-6 have been included to show graphically the meaning of some of the tabular results. Figure 1 is a reflected energy histogram illustrative of information contained on the Type 1 printout. The reflected energy distribution is not affected very much by changes in the angle of incidence. The qualitative explanation of the reflected spectral distribution is as follows. The inelastic cross section for 3 MEV neutrons is about one-third of the total cross section. Large numbers of neutrons reflect after suffering one or a few elastic collisions; these neutrons have energies between 2.5 and 3 MEV. A slightly larger number reflect after suffering one inelastic collision and a small number (zero, one or two) of elastic collisions. The energy loss from the inelastic collision is approximately 0.85 MEV, while the average loss for an elastic collision is about an order of magnitude smaller than this. Therefore many neutrons reflect with energies between 2 and 2.5 MEV. Few reflect with energies between 1.5 and 2 MEV since this requires an inelastic and several elastic collisions. Many reflected neutrons are found between 1 and 1.5 MEV. These neutrons have suffered two inelastic and a small number of elastic collisions. Between 0.5 and 1 MEV only a small number of neutrons reflect; these have suffered two inelastic and several elastic collisions. Below 0.5 MEV the reflected neutrons have suffered three inelastic collisions and some elastic collisions. The number of such neutrons decreases with decreasing emergent energies since larger numbers of elastic collisions become required and a large number of collisions prior to emergence is unlikely.

Figure 2 is also obtained from a Type 1 printout and is typical of reflected angular distributions generally. For the normal incidence curves shown on Figure 2, there are twelve points whereas on the curves for slant incidence there are four points. Since for the case of normal incidence the reflected neutron distribution has no azimuthal dependence, the twelve available angular regions are all used to obtain the dependence of the reflected distribution upon the polar angle. For slant incident neutrons there is an azimuthal dependence; this has been suppressed in Figure 2 by integration over the azimuthal angle. This accounts for the greater dispersion of the plotted points for the normal incidence curve as compared with that of the slant incidence curves.

Figures 3-6 are obtained from the Type 2 printout. Figures 3-5 illustrate the appearance of energy-dependent flux distributions for three incident energies: 0.5, 2.0 and 5.0 MEV. The shapes of the curves are typical of flux versus depth plots for various materials, incident angles and incident energies with the following exceptions. The curves for the various energy groups are not parallel even after a penetration of ten inches. Thus, if neutrons penetrating iron ever do attain a quasi-equilibrium spectral distribution, a very thick iron medium is required. For the very low energy neutrons, i.e. 10 electron volts to 25 KEV, the flux curve does not exhibit a peak for the 2.0 and 5.0 MEV incident neutron energies. This is probably due to the fact that a neutron ceases to suffer inelastic collisions when its energy has dropped below 0.85 MEV. Thus, there are neutrons having a distribution of energies between 25 KEV and 0.85 MEV which can only fall below 25 KEV by elastic collisions. For those near 0.85 MEV an enormous number of such collisions would be required, while for those having only a little more than 25 KEV energy only a few would be required. Therefore, the spatial distribution of the low energy neutrons is greatly spread out.

In figure 5, it is seen that for 5 MEV incident neutrons, the spatial flux distribution for neutrons between 3 and 4 MEV fails to show a peak. Note, however, that this flux is very low so that this could be due to poor statistics. The reason the 3 to 4 MEV flux is low is also explicable upon considering the iron cross section information. A nuclear temperature model was used for neutrons of energy greater than 3 MEV undergoing inelastic collision. This leads to the fact that very few neutrons which suffer an

inelastic collision retain an energy in excess of 3 MEV. Thus, most neutrons in the 3 to 4 MEV group have suffered many elastic collisions and therefore these neutrons are spread out spatially. On the other hand, neutrons suffering only one or a few elastic collisions fall into the 4 to 5 MEV group; the flux for this group is consequently large near the incident face and as can be seen from figure 5, it peaks in the usual manner.

In figure 6, the shapes of the curves are similar. This figure illustrates the difference between flux versus depth (slab thickness 12 inches) and flux versus thickness in which case the slab thickness is equal to the value of the abscissa just as though the remainder of the 12 inches were not present. The difference between the two curves in figure 6 represents the increase in flux due to neutrons bouncing back and forth across a surface on the slab interior.

For certain problems which require detailed input information, it would be preferable to have the information in the form of analytical expressions fitted to the data since the handling of detailed information via tables is cumbersome, especially in hand computations. Many of the more important results conform to general patterns as depicted by the curves in the illustrative figures. Thus, one might expect a reasonable degree of success in fitting the results to analytical expressions. However, the tabular printouts contain a diversity of frequently useful information so that a large number of fits would be required. Those likely to be the most generally useful are not obvious at present. Further, each prospective user must place his own demands on the accuracy with which the analytical expressions fit the data, and the range over which each fit is valid. Therefore, the authors feel that the tabular display of results chosen is the most appropriate form of presentation.

		
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FIG. 1 - NEUTRON REFLECTED ENERGY SPECTRUM

SLAB MATERIAL - IRON

INCIDENT ENERGY = 3 MEV

SLAB THICKNESS = 12 INCHES

θ_0 = ANGLE OF INCIDENCE

F = ARBITRARY NUMBER

BASED ON RUN NOS. 764, 758, 765, 766

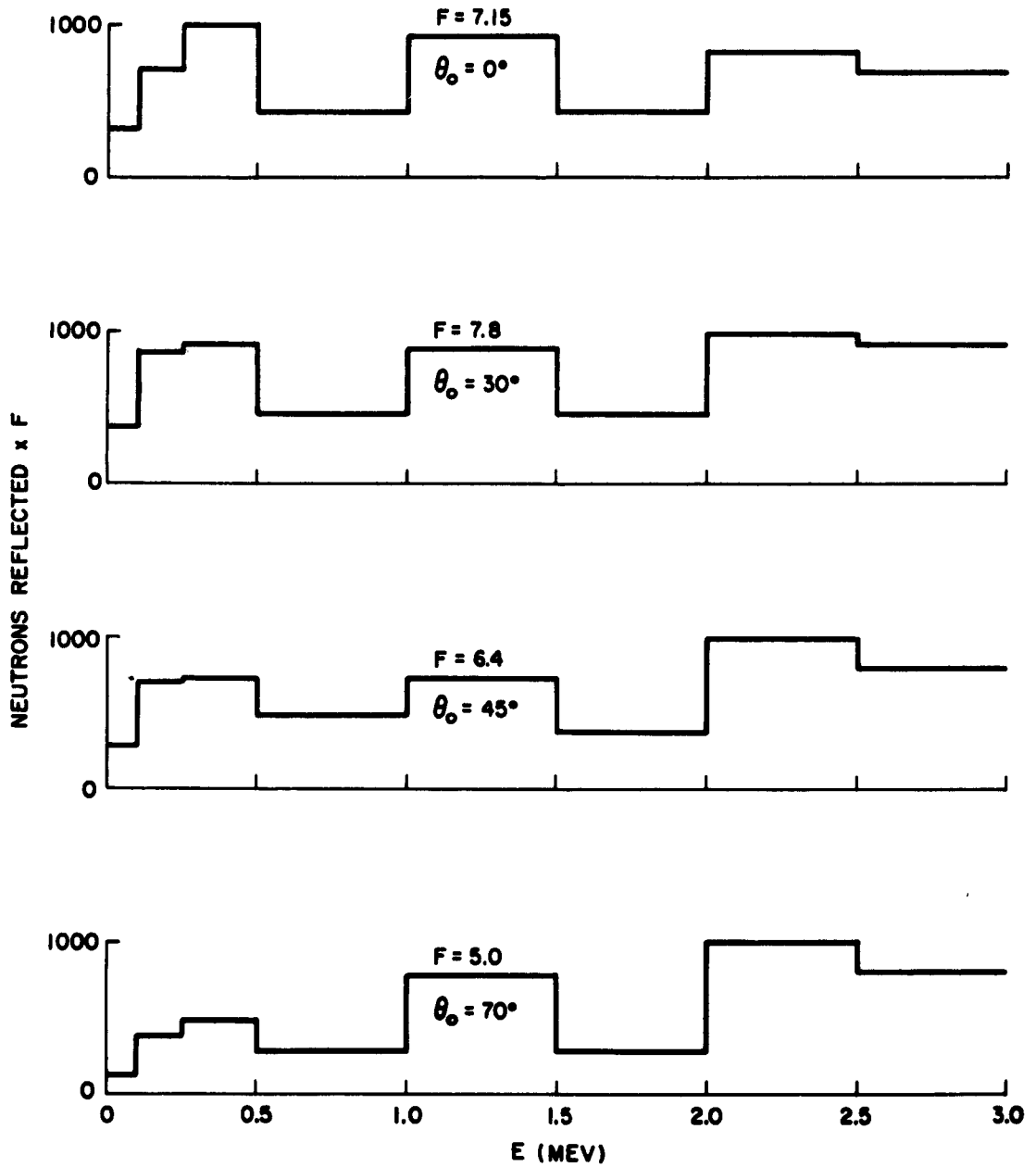
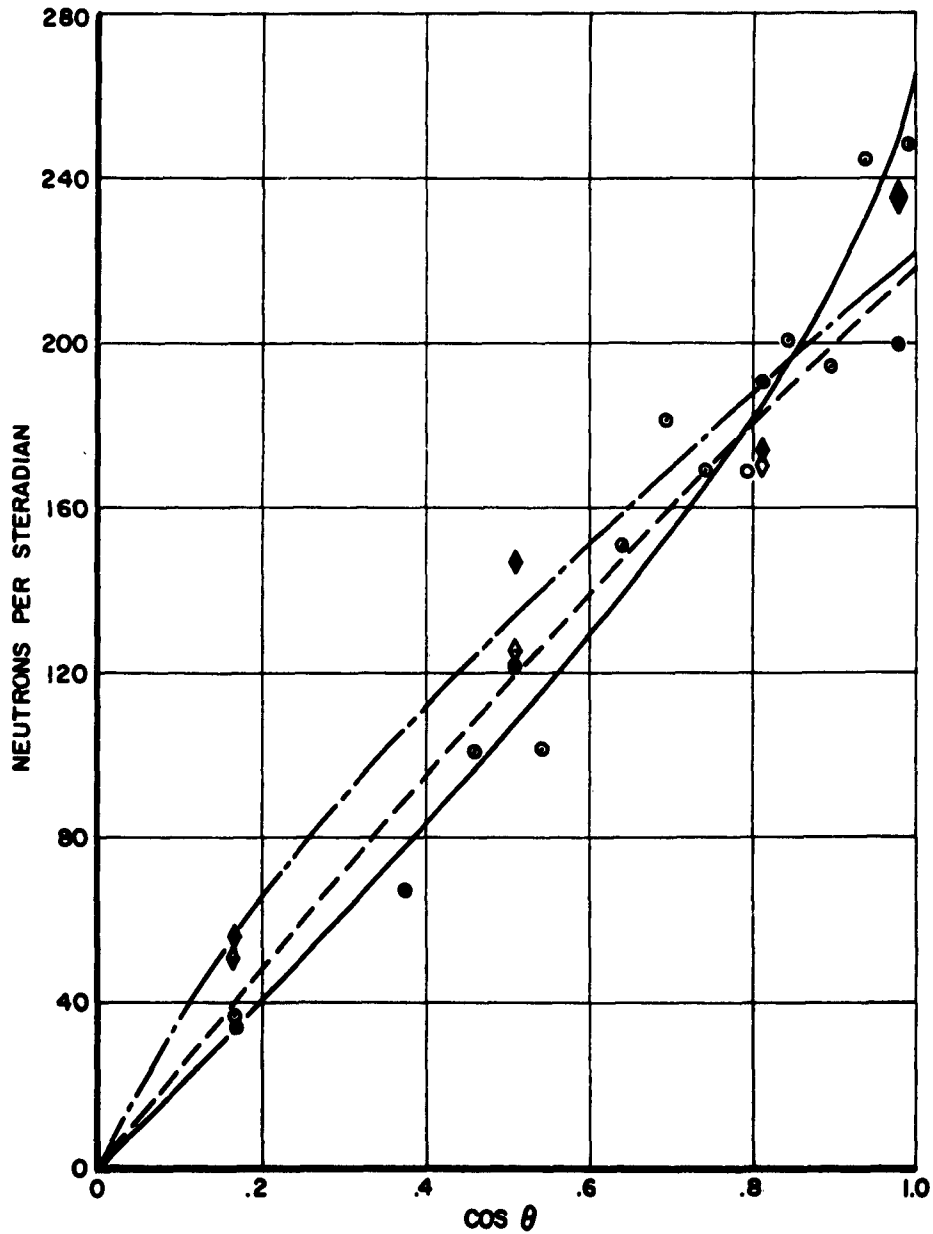


FIG. 2 - NEUTRON REFLECTED ANGULAR DISTRIBUTION

SLAB MATERIAL = 12" IRON
INCIDENT ENERGY = 1.0 MEV
INCIDENT ANGLES

- - 0° ———
- - 30° ———
- ◊ - 45° ———
- ◆ - 70° ———

BASED ON RUNS - 755, 760, 761, 774



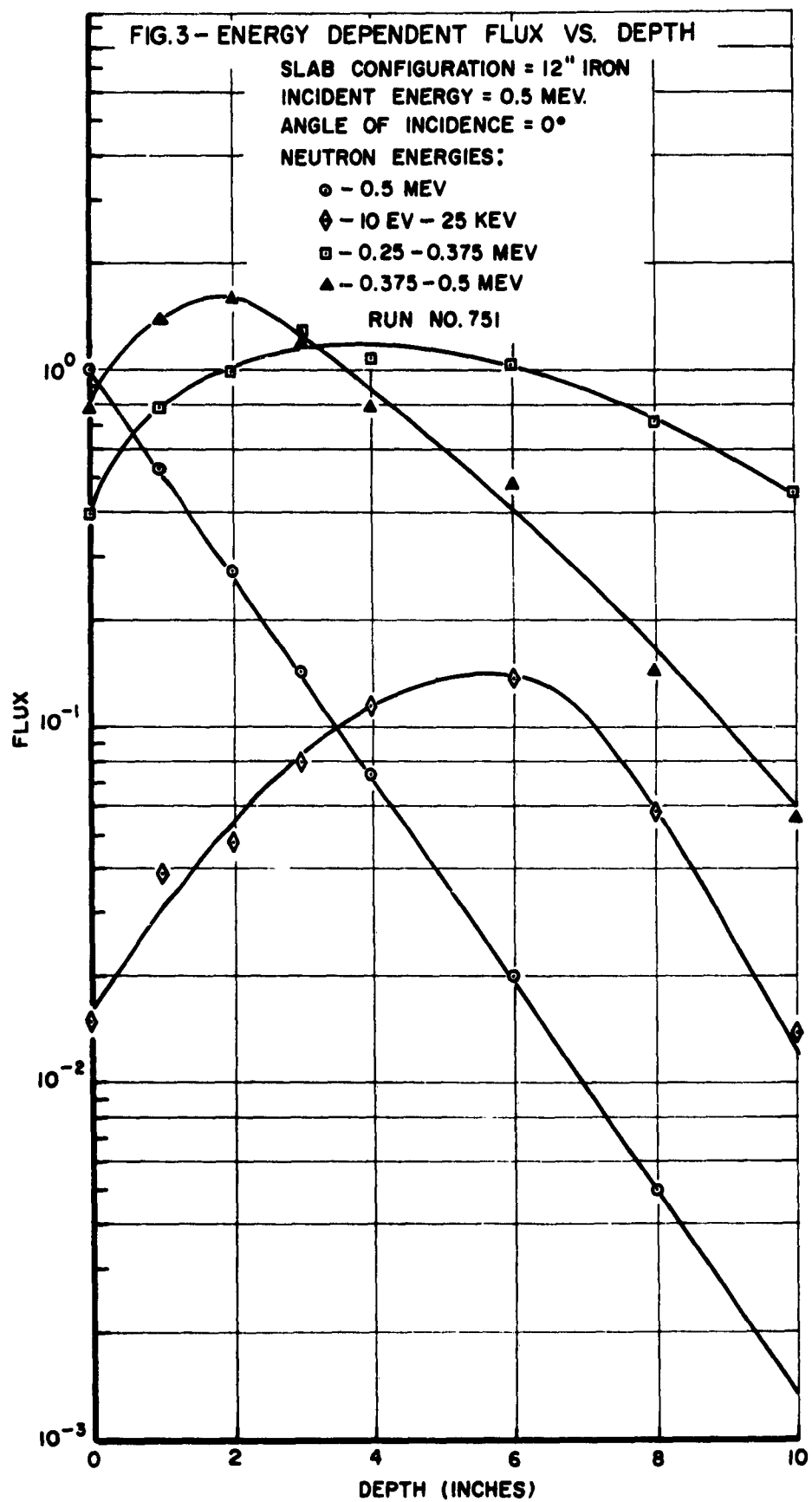


FIG. 4 - ENERGY DEPENDENT FLUX VS. DEPTH

SLAB CONFIGURATION = 12" IRON

INCIDENT ENERGY = 2.0 MEV

ANGLE OF INCIDENCE = 0°

NEUTRON ENERGIES

● - 2.0 MEV

◊ - 10 EV - 25 KEV

■ - 1 - 1.5 KEV

▲ - 1.5 - 2.0 MEV

RUN NO. 756

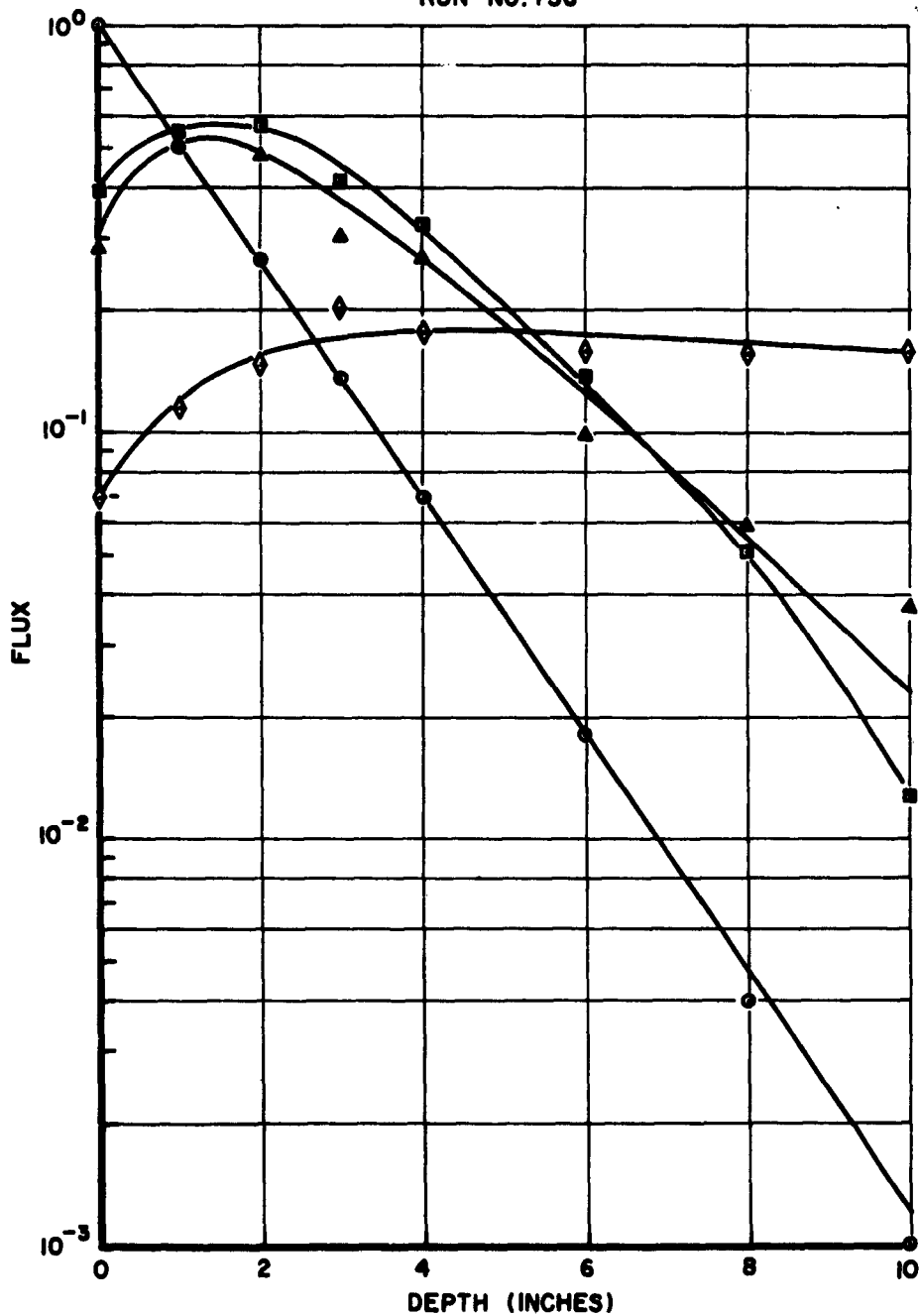


FIG. 5 - ENERGY DEPENDENT FLUX VS. DEPTH

SLAB CONFIGURATION = 12" IRON

INCIDENT ENERGY = 5.0 MEV

ANGLE OF INCIDENCE = 0°

NEUTRON ENERGIES

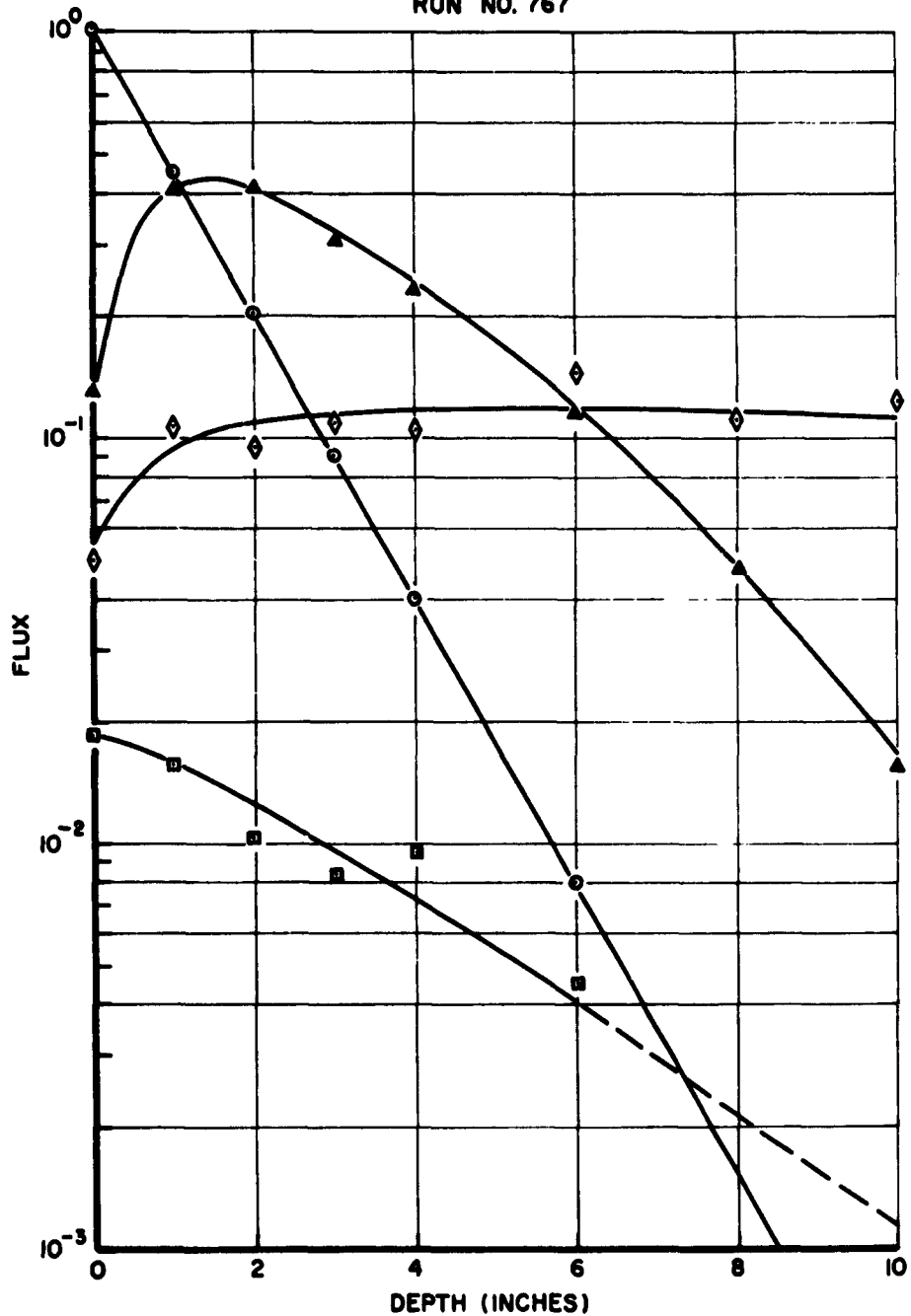
○ - 5.0 MEV

◇ - 10 EV - 25 KEV

■ - 3.0 MEV - 4.0 MEV

▲ - 4.0 MEV - 5.0 MEV

RUN NO. 767



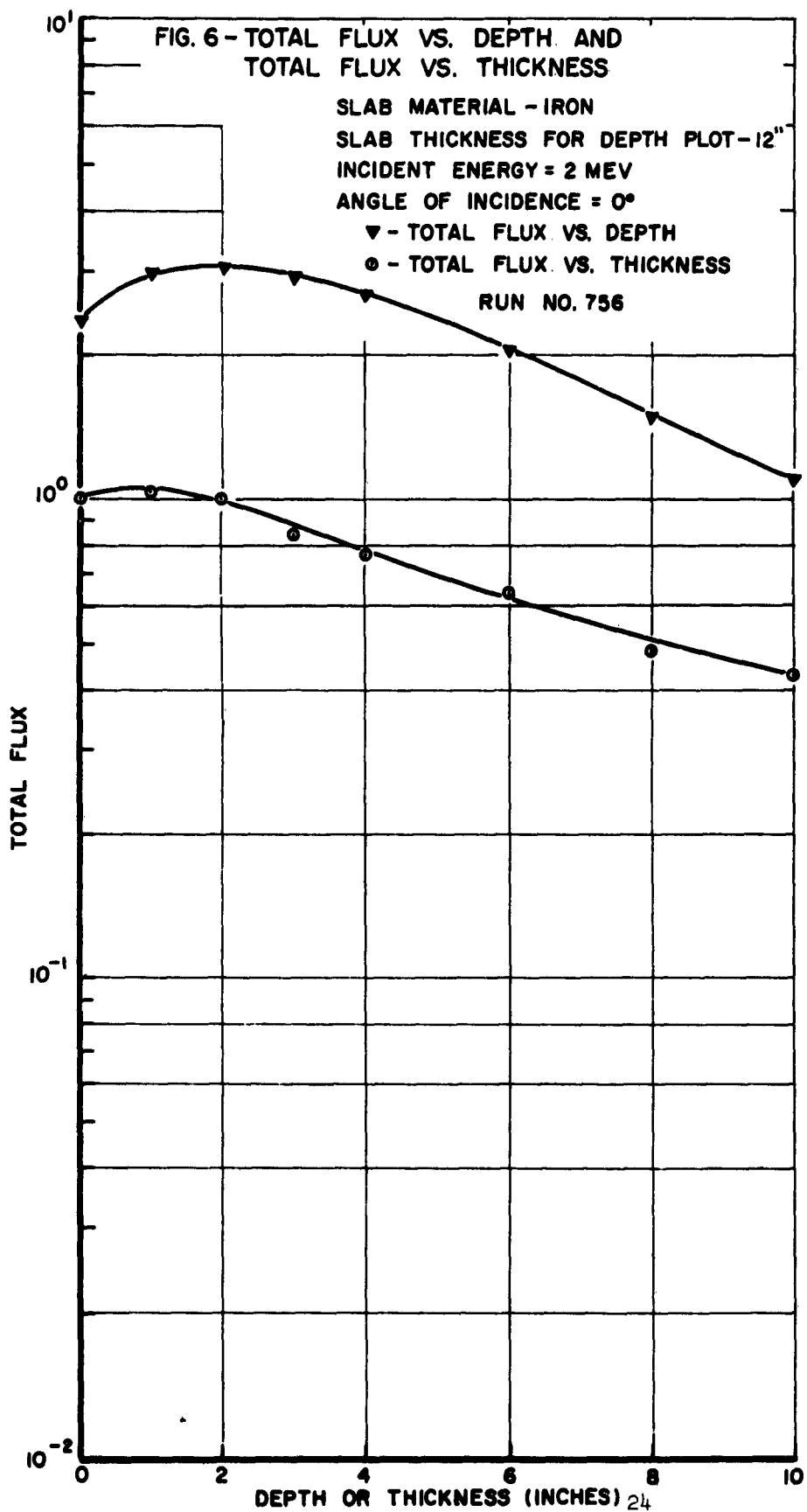


TABLE I

REFLECTION DATA FOR IRON

$\begin{array}{c} \theta_o \rightarrow \\ E_o \downarrow \\ \text{(Mev)} \end{array}$	NUMBER ALBEDO				NUMBER FLUX ALBEDO			
	0	30	45	70	0	30	45	70
0.1	.747	.783	.801	.879	1.527	1.324	1.133	.642
0.25	.762	.771	.819	.843	1.605	1.286	1.156	.602
0.50	.742	.754	.793	.855	1.377	1.259	1.038	.611
1.0	.723	.730	.758	.823	1.399	1.210	1.132	.604
2.0	.723	.757	.769	.834	1.436	1.327	1.082	.623
3.0	.751	.746	.792	.825	1.527	1.265	1.071	.599
5.0	.733	.711	.792	.852	1.383	1.182	1.078	.670
14.0	.622	.647	.702	.742	1.201	1.063	.963	.526

ENERGY ALBEDO

DOSE ALBEDO

0.1	.514	.549	.582	.677	1.157	1.007	.870	.503
0.25	.584	.605	.649	.708	1.252	1.002	.907	.482
0.50	.537	.567	.594	.695	1.108	1.040	.855	.523
1.0	.309	.333	.374	.423	.731	.684	.668	.370
2.0	.301	.303	.338	.410	.987	.872	.773	.478
3.0	.301	.315	.346	.420	1.036	.867	.752	.465
5.0	.147	.131	.183	.261	.663	.562	.562	.397
14.0	.0574	.0665	.0707	.101	.493	.439	.410	.258

TABLE II

ENERGY SETS
AND

FLUX TO DOSE CONVERSION FACTORS

ENERGY GROUP	SET 2		SET 2A		SET 2B	
	Energy Interval (MEV)	Conversion Factor (Rads/Unit Flux)	Energy Interval (MEV)	Conversion Factor (Rads/Unit Flux)	Energy Interval (MEV)	Conversion Factor (Rads/Unit Flux)
1	.00001-.001	.64 x 10 ⁻⁹	.00001-.001	.64 x 10 ⁻⁹	.00001-.001	.64 x 10 ⁻⁹
2	.001-.025	.59	.001-.025	.59	.001-.025	.59
3	.025-.1	.81	.025-.1	.81	.025-.1	.81
4	.1-.25	1.3	.1-.25	1.3	.1-.25	1.3
5	.25-.5	2.0	.25-.5	2.0	.25-.5	2.0
6	.5-1.0	3.1	.5-1.0	3.1	.5-1.0	3.1
7	1.0-2.0	4.0	1.0-2.0	4.0	1.0-1.5	3.9
8	2.0-3.0	4.3	2.0-3.0	4.3	1.5-2.0	4.1
9	3.0-5.0	5.1	3.0-4.0	4.7	2.0-2.5	4.2
10	5.0-16.0	6.8	4.0-5.0	5.5	2.5-3.0	4.4

ENERGY GROUP	SET 2C		SET 2D		SET 2E	
	Energy Interval (MEV)	Conversion Factor (Rads/Unit Flux)	Energy Interval (MEV)	Conversion Factor (Rads/Unit Flux)	Energy Interval (MEV)	Conversion Factor (Rads/Unit Flux)
1	.00001-.001	.64 x 10 ⁻⁹	.00001-.001	.64 x 10 ⁻⁹	.00001-.0005	.65 x 10 ⁻⁹
2	.001-.025	.59	.001-.025	.59	.0005-.001	.62
3	.025-.1	.81	.025-.0625	.71	.001-.013	.59
4	.1-.25	1.3	.0625-.1	.91	.013-.025	.59
5	.25-.375	1.8	.1-.175	1.2	.025-.0625	.71
6	.375-.5	2.2	.175-.25	1.4	.0625-.1	.91
7	.5-.75	2.8	.25-.375	1.8	.1-.175	1.2
8	.75-1.0	3.4	.375-.5	2.2	.175-.25	1.4
9	1.0-1.5	3.9	.5-.75	2.8	.25-.375	1.8
10	1.5-2.0	4.1	.75-1.0	3.4	.375-.5	2.2

TABLE III

FLUX TO DOSE CONVERSION FACTORS FOR SOURCE ENERGIES

E_0 (MEV)	Conversion Factor (D_E) (Rads. per unit flux)
.1	1.1×10^{-9}
.25	1.7
.5	2.4
1.0	3.8
2.0	4.1
2.67	4.4
3.0	4.6
4.0	5.1
5.0	5.8
7.0	6.8
10.0	7.0
14.1	7.0*

* Extrapolated

TABLE IV
HISTOGRAM θ 2541

Sector	$\cos \theta_1$	$\cos \theta_2$	θ_1	θ_2	$\bar{\theta}$	Sec $\bar{\theta}$	Solid Angle
1	1.00000	.95833	0	16°35.9'	8°18'	1.0106	.26180
2	.95833	.91667	16°35.9'	23°33.4'	20° 5'	1.0647	.26180
3	.91667	.86667	23°33.4'	29°55.6'	26°45'	1.1198	.31416
4	.86667	.81667	29°55.6'	35°14.8'	32°35'	1.1868	.31416
5	.81667	.76667	35°14.8'	39°56.7'	37°36'	1.2622	.31416
6	.76667	.71667	39°56.7'	44°13.2'	42° 5'	1.3474	.31416
7	.71667	.66667	44°13.2'	48°11.4'	46°12'	1.4448	.31416
8	.66667	.58333	48°11.4'	54°18.9'	51°15'	1.5976	.52360
9	.58333	.50000	54°18.9'	60° 0'	57° 9'	1.8435	.52360
10	.50000	.41667	60° 0'	65°22.5'	62°41'	2.1791	.52360
11	.41667	.33333	65°22.5'	70°31.7'	67°57'	2.6637	.52360
12	.33333	.00000	70°31.7'	90°	80°16'	5.9150	2.09440

TABLE V

HISTOGRAM $\theta \phi$

Sector	$\cos \theta_1$	$\cos \theta_2$	θ_1	θ_2	$\bar{\theta}$	Sec $\bar{\theta}$	Solid Angle	$ \phi_1 $	$ \phi_2 $
1	1.0	11/12	0	23°33.4'	11°47'	1.0215	$\pi/6$	0	π
2	11/12	2/3	23°33.4'	48°11.4'	35°52'	1.2340	$\pi/6$	2 $\pi/3$	π
3	11/12	2/3	23°33.4'	48°11.4'	35°52'	1.2340	$\pi/6$	$\pi/3$	2 $\pi/3$
4	11/12	2/3	23°33.4'	48°11.4'	35°52'	1.2340	$\pi/6$	0	$\pi/3$
5	2/3	1/3	48°11.4'	70°31.7'	59°22'	1.9625	$\pi/6$	3 $\pi/4$	π
6	2/3	1/3	48°11.4'	70°31.7'	59°22'	1.9625	$\pi/6$	$\pi/2$	3 $\pi/4$
7	2/3	1/3	48°11.4'	70°31.7'	59°22'	1.9625	$\pi/6$	$\pi/4$	$\pi/2$
8	2/3	1/3	48°11.4'	70°31.7'	59°22'	1.9625	$\pi/6$	0	$\pi/4$
9	1/3	0	70°31.7'	90°	80°16'	5.9150	$\pi/6$	3 $\pi/4$	π
10	1/3	0	70°31.7'	90°	80°16'	5.9150	$\pi/6$	$\pi/2$	3 $\pi/4$
11	1/3	0	70°31.7'	90°	80°16'	5.9150	$\pi/6$	$\pi/4$	$\pi/2$
12	1/3	0	70°31.7'	90°	80°16'	5.9150	$\pi/6$	0	$\pi/4$

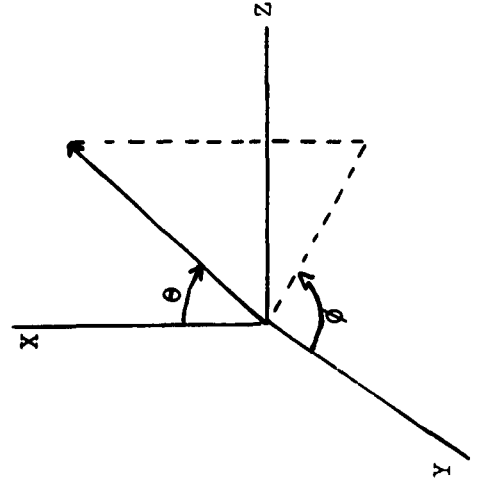
 $\theta \phi$ HISTOGRAM DIAGRAM

TABLE VI
ABBREVIATIONS USED ON MACHINE PRINTOUTS

MFP.	Mean Free Path
INC.	Incident
COS.	Cosine
EGY.	Energy
FLX.	Flux
NT.	Neutron
DSE.	Dose
NO.	Number
TRAN TRANS }	Transmission
REFL.	Reflection
FACT.	Factor
B-POLY.	Polyethylene borated with 8% boron carbide by weight
STER.	Steradian
S SCAT. }	Scattered
U UNC. UNSCAT. }	Unscattered
ABS.	Absorption
GRPS.	Groups
TTL.	Total
BDS.	Boundaries

REFERENCES

1. Allen, F., Futterer, A., and Wright W. Neutron Transmission Versus Thickness for Some Common Materials. BRL 1174, September 1962.
2. Goldstein, Herbert. Fundamental Aspects of Reactor Shielding. Addison-Wesley Publishing Co., Inc., 1959.
3. Allen, F., Futterer, A., and Wright W. Neutron Reflection and Flux Versus Depth for Concrete. BRL 1189, January 1963.
4. Allen, F., Futterer, A., and Wright W. Neutron Reflection and Flux Versus Depth for Nevada Test Site Soil. BRL 1190, January 1963.

MACHINE PRINTOUTS

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
733	.10000000	1.00000000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00631939	.00279220	.01634200	.20655849	.21271169
2	.03614952	.00944529	.09017742	.28772092	.74432932
3	.04524745	.00813539	.10544314	.29339197	.74221009
4	.09446623	.03159312	.15739083	.36975289	.81859557
6	.09113536	.00864218	.14275187	.47211366	.91702581
8	.09107831	.03837799	.17439668	.46607324	.46179126
10	.02953649	.00156830	.14543549	.49992866	.36786572
12	.01823566	.00427358	.10902438	.33227661	.18175926
	.00171620		.02355299	.17039442	.02789644

INCHES	6	7	8	9	10
1	1.08205579				
2	1.74982794				
3	1.41749134				
4	.98662447				
6	.65324715				
8	.22621059				
10	.10454356				
12	.02468065				
	.01121632				

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					.00436135
2				.00160339	.04804991
3				.01589467	.10589274
4				.03369420	.14814626
6	.00110434			.15867206	.16394390
8	.00121640		.00234538	.18726362	.10864302
10	.00263007	.00138659	.00800529	.20832408	.07408396
12	.00171620		.02355299	.17039442	.02789644

INCHES	6	7	8	9	10
1	.49771061				
2	.56148375				
3	.46949013				
4	.36243730				
6	.13225701				
8	.06745391				
10	.02255682				
12	.01121632				

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.00000000	1.09999999	1.00000000	2.41574170
1	.70299999	.94107196	1.00482130	.43900000	3.35665041
2	.53499999	.80313705	.81483420	.19200001	2.80391938
3	.42699999	.67527754	.64380882	.08400000	2.54242311
4	.35299999	.58127776	.52064470	.03700001	2.32191602
6	.26599999	.46297732	.35305343	.00700000	1.46492808
8	.21299999	.36792233	.25957899	.00100001	1.14987822
10	.16400000	.31698681	.20773733		.67025014
12	.13100000	.23477635	.14748589		.23477636

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
733	.10000000	1.00000000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00631939	.00279220	.01634200	.20655849	.21271169
2	.03614952	.00944529	.09017742	.28772092	.74432932
3	.04524745	.00813539	.10544314	.29339197	.74221009
4	.09446623	.03159312	.15739083	.36975289	.81859557
6	.09113536	.00864218	.14275187	.47211366	.91702581
8	.09107831	.03837799	.17439668	.46607324	.46179126
10	.02953649	.00156830	.14543549	.49992866	.36786572
12	.01823566	.00427358	.10902438	.33227661	.18175926
	.00171620		.02355299	.17039442	.02789644

INCHES	6	7	8	9	10
1	1.08205579				
2	1.74902794				
3	1.41749134				
4	.98662447				
6	.65324715				
8	.22621059				
10	.10454356				
12	.02468065				
	.01121632				

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					.00436135
2				.00160339	.04804991
3				.01589467	.10589274
4				.03369420	.14814626
6	.00110434			.15867206	.16394390
8	.00121640		.00234538	.18726362	.10864302
10	.00263007	.00138659	.00800529	.20832408	.07408396
12	.00171620		.02355299	.17039442	.02789644

INCHES	6	7	8	9	10
1	.49771061				
2	.56148375				
3	.46949013				
4	.36243730				
6	.13225701				
8	.06745391				
10	.02255682				
12	.01121632				

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.00000000	1.09999999	1.00000000	2.41574170
1	.70299999	.94107196	1.00482130	.43900000	3.35665041
2	.53499999	.80313705	.81483420	.19200001	2.80391938
3	.42699999	.67527754	.64380882	.08400000	2.54242311
4	.35299999	.58127776	.52064470	.03700001	2.32191602
6	.26599999	.46297732	.35305343	.00700000	1.46492808
8	.21299999	.36792233	.25957899	.00100001	1.14987822
10	.16400000	.31698681	.20773733		.67025014
12	.13100000	.23477635	.14748589		.23477636

RUN NUMBER 733	HISTORIES 1000	ENERGY SET 2E	ANGLE SET 2541	SLANT MFP 9.882027
INC. ENERGY .100000	COS. THETA 1.000000	CUTOFF EGY .000010	INC.FLX/NT 1.000000	INC.DSE/NT 1.100000

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO. FLX. REFL. FACTOR	DOSE REFL. FACTOR
1	.001000	.001843	.001089	.005000	.006319	.003734
2				.002000	.002792	.001574
3	.012000	.024149	.012953	.012000	.016342	.008765
4	.092000	.180581	.096857	.094000	.206558	.110791
5	.018000	.027817	.017955	.120000	.212712	.137296
6	.008000	.011272	.009325	.514000	1.082056	.895155
7						
8						
9						
10						

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.013000	.049656	.029302	.067000	.255921	.185114
2	.008000	.030558	.017894	.049000	.187166	.151546
3	.012000	.038197	.025793	.059000	.187802	.162311
4	.009000	.028648	.018236	.061000	.194169	.195204
5	.007000	.022282	.015523	.067000	.213267	.204282
6	.009000	.028648	.021639	.062000	.197352	.200760
7	.012000	.038197	.034617	.053000	.168704	.183037
8	.012000	.022918	.019971	.059000	.112681	.138329
9	.021000	.040107	.043050	.059000	.112681	.156484
10	.007000	.013369	.016080	.056000	.106952	.174038
11	.011000	.021008	.031125	.054000	.103132	.213758
12	.010000	.004775	.015148	.092000	.043927	.198002

(S+U) NO. TRAN. FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT. NO. FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.131000	.138179		.131000	.245663	.138179	.003484

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.747000	1.526780	1.157315	.051432	.450820	.111000	.011000

MEAN ENERGY SCAT. TR. NT.	MEAN ENERGY REFL. NT.
.002659	.006885

1102.202618

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
736	.10000000	.86603000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00196251	.00123400	.03449853	.17877153	.21408548
2	.00463648	.00136636	.08818173	.27609998	.64088631
3	.02682668		.09579831	.34726215	.79528242
4	.04351590	.00250380	.20169947	.43212711	.72576031
6	.03450640	.01430077	.14679178	.43432238	.81367440
8	.10450868	.00873433	.12558961	.55238927	.61485089
10	.03315780	.03292952	.18087209	.42049989	.25155812
12	.03863090	.00583992	.11218676	.27395307	.10109441
	.00228783	.00367563	.02238681	.13698576	.01756476

INCHES	6	7	8	9	10
1	1.09845403				
2	1.79187963				
3	1.38111290				
4	.94601706				
6	.61579764				
8	.22080474				
10	.10464681				
12	.03953739				
	.01142799				

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					.01325014
2				.00533081	.05061386
3				.01605863	.09197519
4			.00156821	.03192237	.16295078
6			.00100905	.11411453	.16664345
8	.00183305		.00570638	.17064888	.07967289
10	.00651917	.00100291	.01618985	.16409383	.04234404
12	.00228783	.00367563	.02238681	.13698576	.01756476

INCHES	6	7	8	9	10
1	.54355261				
2	.58317817				
3	.46353388				
4	.32584239				
6	.14372962				
8	.06838413				
10	.02148389				
12	.01142799				

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.15469441	1.27016384	1.15469441	2.61603540
1	.67699999	1.00251479	1.06610424	.44571203	3.24876255
2	.50399999	.81117230	.81650050	.17204947	2.81833193
3	.39599999	.63738529	.60685664	.06581758	2.41744122
4	.31899999	.54769402	.48907531	.02540328	2.08479665
6	.24199999	.42896073	.33462094	.00346409	1.63034160
8	.17300000	.32624534	.22834610		1.02366423
10	.13700000	.25163370	.16561023		.57124246
12	.11100000	.19432878	.12323141		.19432878

RUN NUMBER 738 HISTORIES 1000 ENERGY SET 2E ANGLE SET 0° SLANT MFP 11.410722

INC. ENERGY .100000 COS. THETA .866030 CUTOFF EGY .000010 INC.FLX/NT 1.154694 INC.DSE/NT 1.270164

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)
2.5400 2.5400 2.5400 2.5400 5.0800 5.0800
5.0800 5.0800

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1	.002000	.001953	.001154	.001000	.001700	.001004
2	.002000	.002768	.001560	.001000	.001069	.000602
3	.011000	.019679	.010555	.017000	.029877	.016025
4	.076000	.120448	.064604	.086000	.154821	.083041
5	.012000	.015611	.010076	.124000	.185404	.119670
6	.008000	.008628	.007138	.554000	.951294	.786980
7						
8						
9						
10						

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.022000	.042017	.021872	.109000	.208174	.136132
2	.021000	.040107	.023657	.101000	.192895	.159775
3	.018000	.034377	.021060	.104000	.198625	.161427
4	.007000	.013369	.009296	.115000	.219633	.178052
5	.011000	.021008	.019594	.062000	.118411	.153504
6	.009000	.017189	.016968	.067000	.127960	.164275
7	.010000	.019099	.018118	.072000	.137510	.174219
8	.005000	.009549	.009059	.070000	.133690	.177701
9	.002000	.003820	.010495	.022000	.042017	.167740
10	.001000	.001910	.005248	.023000	.043927	.177968
11	.003000	.005730	.015742	.021000	.040107	.147551
12	.002000	.003820	.010495	.017000	.032468	.125494

(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.111000	.095088		.111000	.169088	.095088	.002935

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.783000	1.324165	1.007322	.054865	.421976	.094000	.012000

	MEAN ENERGY SCAT.TR.NT.	MEAN ENERGY REFL. NT.
1102.205236	.002644	.007007

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
737	.10000000	.70711000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00319651	.00319651	.00741451	.16985152	.23183949
2	.02640684	.01414484	.04082130	.22226599	.61867041
3	.01378311	.01123689	.06413576	.28561460	.72859886
4	.04530372	.00231528	.16813511	.34724265	.64881087
6	.06112139	.02360401	.18845841	.40077894	.64643991
8	.11521501	.02710061	.18765691	.34430670	.51884360
10	.07593897	.01433687	.14918406	.35698603	.27618589
12	.01662307	.00566695	.11028205	.18395966	.11031763
	.00466876	.00330354	.01730064	.13647312	.03026983

INCHES	6	7	8	9	10
1	1.18737353				
2	1.64460534				
3	1.31017350				
4	.86194519				
6	.51109368				
8	.16886077				
10	.09752977				
12	.04069891				
	.01423262				

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					.00727570
2				.00216859	.03809920
3				.01354648	.09398975
4				.02359241	.12186896
6				.09705726	.16791977
8	.00183305	.00127918	.00813988	.11833405	.07942765
10	.00119629		.02271762	.12501575	.04282997
12	.00466876	.00330354	.01730064	.13647312	.03026983

INCHES	6	7	8	9	10
1	.54947305				
2	.54428776				
3	.41904359				
4	.30432475				
6	.13890197				
8	.07265293				
10	.02759220				
12	.01423262				

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.41420712	1.55562783	1.41420712	2.93645042
1	.61699999	.99798138	1.06127670	.44123261	3.00814736
2	.44299999	.72173363	.72914411	.13717808	2.55072080
3	.33599999	.56900603	.53570943	.04242620	2.11617904
4	.27999999	.46251398	.41331455	.01272786	1.84422421
6	.21099999	.40387899	.31521898		1.36198360
8	.16400000	.28166674	.20205902		.97016160
10	.13000000	.21935183	.14634693		.46754827
12	.10900000	.20624850	.13335914		.20624850

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
737	.10000000	.70711000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00319651	.00319651	.00741451	.16985152	.23183949
2	.02640684	.01414484	.04082130	.22226599	.61867041
3	.01378311	.01123689	.06413576	.28561460	.72859886
4	.04530372	.00231528	.16813511	.34724265	.64881087
6	.06112139	.02360401	.18845841	.40077894	.64643991
8	.11521501	.02710061	.18765691	.34430670	.51884360
10	.07593897	.01433687	.14918406	.35698603	.27618589
12	.01662307	.00566695	.11028205	.18395966	.11031763
12	.00466876	.00330354	.01730064	.13647312	.03026983

INCHES	6	7	8	9	10
1	1.18737353				
2	1.64460534				
3	1.31017350				
4	.86194519				
6	.51109368				
8	.16886077				
10	.09752977				
12	.04069891				
12	.01423262				

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					.00727570
2				.00216859	.03809920
3				.01354648	.09398975
4				.02359241	.12186896
6				.09705726	.16791977
8	.00183305	.00127918	.00813988	.11833405	.07942765
10	.00119629		.02271762	.12501575	.04282997
12	.00466876	.00330354	.01730064	.13647312	.03026983

INCHES	6	7	8	9	10
1	.54947305				
2	.54428776				
3	.41904359				
4	.30432475				
6	.13890197				
8	.07265293				
10	.02759220				
12	.01423262				

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.41420712	1.55562783	1.41420712	2.93645042
1	.61699999	.99798138	1.06127670	.44123261	3.00814736
2	.44299999	.72173363	.72914411	.13717808	2.55072080
3	.33599999	.56900603	.53570943	.04242620	2.11617904
4	.27999999	.46251398	.41331455	.01272786	1.84422421
6	.21099999	.40387899	.31521898		1.36198360
8	.16400000	.28166674	.20205902		.97016160
10	.13000000	.21935183	.14634693		.46754827
12	.10900000	.20624850	.13335914		.20624850

RUN NUMBER 737	HISTORIES 1000	ENERGY SET 2E	ANGLE SET 0°	SLANT MFP 13.975234
INC. ENERGY .100000	COS. THETA .707110	CUTOFF EGY .000010	INC.FLX/NT 1.414207	INC.DSE/NT 1.555628

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1	.002000	.002775	.001640	.002000	.002260	.001336
2	.002000	.002775	.001564	.002000	.002260	.001274
3	.009000	.011678	.006264	.005000	.005243	.002812
4	.071000	.103183	.055343	.085000	.120104	.064419
5	.017000	.022265	.014371	.121000	.163936	.105813
6	.008000	.010355	.008566	.586000	.839604	.694581
7						
8						
9						
10						

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.016000	.030558	.013043	.097000	.185256	.100165
2	.010000	.019099	.008939	.112000	.213904	.141121
3	.015000	.028648	.014741	.108000	.206264	.137440
4	.016000	.030558	.015877	.106000	.202445	.136894
5	.008000	.015279	.012240	.066000	.126050	.134877
6	.009000	.017189	.012938	.073000	.139419	.146080
7	.008000	.015279	.011950	.076000	.145149	.155019
8	.015000	.028648	.023250	.072000	.137510	.151188
9	.003000	.005730	.012854	.022000	.042017	.134926
10	.001000	.001910	.004285	.024000	.045836	.145819
11	.005000	.009549	.024618	.021000	.040107	.128898
12	.003000	.005730	.012854	.024000	.045836	.149595

(S+U) NO. TRAN.FACT. .109000	(S+U) DOSE TRAN. FACT. .087749	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT. .109000	SCAT.NO.FLX TRAN. FACT. .153031	SCAT. DOSE TRAN. FACT. .087749	SCAT. EGY. TRAN. FACT. .003056
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NUMBER REFL. FACT. .801000	NO. FLUX REFL. FACT. 1.133407	DOSE REFL. FACT. .870235	ENERGY REFL. FACT. .058288	ENERGY ABS. FACTOR .386534	NUMBER ABS. FACTOR .081000	NO. CUTOFF FACTOR .009000
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MEAN ENERGY SCAT.TR. NT. 1102.205236		MEAN ENERGY REFL. NT. .002804		MEAN ENERGY REFL. NT. .007277	
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RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
738	.10000000	.34202000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00787752	.00123400	.00937702	.15409199	.16637099
2	.00327576		.03900148	.20052443	.40085127
3	.01064802	.00133187	.04495011	.20868693	.70471616
4	.00582677	.00288164	.08625021	.26636544	.44233215
6	.02858088	.01961535	.09933106	.24621295	.48730561
8	.02096075	.01198818	.03475770	.18502369	.27213135
10	.01918125		.03532179	.17116948	.17692126
12	.00145074	.00535530	.06323517	.11570970	.06415745
		.00162178	.00948686	.08618821	.02195686

INCHES	6	7	8	9	10
1	1.53687100				
2	1.67453389				
3	1.00282653				
4	.59150131				
6	.38528661				
8	.07341965				
10	.04208035				
12	.01256084				
	.00225871				

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					.00334073
2					.07872262
3				.01768544	.07268527
4				.02377874	.11519268
6				.05703904	.08599113
8	.00110356		.00104367	.07923217	.05512999
10			.01003320	.08271554	.03065846
12		.00162178	.00948686	.08618821	.02195686

INCHES	6	7	8	9	10
1	.69973238				
2	.52897097				
3	.30536271				
4	.22397981				
6	.05708344				
8	.03792295				
10	.01256084				
12	.00225871				

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	2.92380562	3.21618617	2.92380562	4.72405993
1	.47599999	.96621562	1.01805813	.26314249	2.58132933
2	.31399999	.63108404	.60638093	.02339046	1.99655006
3	.24299999	.39573343	.36127461		1.39515751
4	.19599999	.36295124	.31315988		1.26633246
6	.12300000	.20011361	.14977839		.59828133
8	.09100000	.17443233	.12232491		.44467414
10	.06900000	.13596804	.08868919		.26246921
12	.05900000	.12151241	.07720366		.12151241

RUN NUMBER 738	HISTORIES 1000	ENERGY SET 2E	ANGLE SET 0°	SLANT MFP 28.893129
INC. ENERGY .100000	COS. THETA .342020	CUTOFF EGY .000010	INC.FLX/NT 2.923806	INC.DSE/NT 3.216186

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1				.002000	.002694	.001592
2	.001000	.000671	.000378	.001000	.000422	.000238
3	.006000	.002958	.001586	.006000	.003207	.001720
4	.039000	.032466	.017413	.074000	.052703	.028268
5	.011000	.007271	.004693	.096000	.056902	.036728
6	.002000	.000844	.000698	.700000	.525641	.434848
7						
8						
9						
10						

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.008000	.015279	.003081	.107000	.204354	.054575
2	.006000	.011459	.002770	.106000	.202445	.066493
3	.010000	.019099	.004558	.114000	.217723	.071791
4	.004000	.007639	.001964	.113000	.215814	.070721
5	.005000	.009549	.003578	.070000	.133690	.071718
6	.005000	.009549	.003718	.083000	.158518	.081076
7	.008000	.015279	.005640	.079000	.150879	.078768
8	.004000	.007639	.002925	.082000	.156608	.083092
9				.031000	.059205	.093889
10	.003000	.005730	.006639	.032000	.061115	.094767
11	.003000	.005730	.006217	.032000	.061115	.099754
12	.003000	.005730	.006217	.030000	.057296	.094767

(S+U) NO. TRAN.FACT. .059000	(S+U) DOSE TRAN. FACT. .024770	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT. .059000	SCAT.NO.FLX TRAN. FACT. .044210	SCAT. DOSE TRAN. FACT. .024770	SCAT. EGY. TRAN. FACT. .001588
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NUMBER REFL. FACT. .879000	NO. FLUX REFL. FACT. .641569	DOSE REFL. FACT. .503394	ENERGY REFL. FACT. .067733	ENERGY ABS. FACTOR .306764	NUMBER ABS. FACTOR .057000	NO. CUTOFF FACTOR .005000
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1102.205236	MEAN ENERGY SCAT.TR.NT. .002691	MEAN ENERGY REFL. NT. .007706
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RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
747	.25000000	1.00000000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1		.00159760	.00611040	.03621994	.02198480
2		.00107258	.01127065	.06185843	.08470519
3		.00123219	.03018204	.09279694	.12422703
4			.03062397	.10044049	.13492133
6			.02814393	.14942105	.18304094
8		.00107412	.04496129	.16691245	.18666599
10	.01552690	.00407278	.03454960	.11554348	.14648608
12	.00331070	.00206600	.02296394	.07113083	.11213360
		.00247081	.00696847	.03956430	.01996218

INCHES	6	7	8	9	10
1	.03766689	.24554463	1.25576198		
2	.05873136	.43290378	1.76750888		
3	.12220408	.56464765	1.53776499		
4	.15001932	.61792908	1.30708554		
6	.16674158	.68481987	.93794059		
8	.15882996	.61036865	.47958526		
10	.15118394	.49514697	.27589523		
12	.10696547	.33174922	.13726520		
	.02728271	.11246209	.05430697		

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					
2					
3					
4					
6				.00614505	.00575036
8			.00100990	.00875490	.01970056
10	.00243568		.00243361	.02737475	.01875837
12	.00331070	.00247081	.00696847	.03956430	.01996218

INCHES	6	7	8	9	10
1		.00184257	.47272972		
2		.01666505	.61125947		
3		.07783224	.54831753		
4	.00346409	.13478104	.46024384		
6	.01057519	.16059654	.31707725		
8	.02808213	.16732716	.19575056		
10	.01860031	.16325625	.08797127		
12	.02728271	.11246209	.05430697		

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.00000000	1.58750000	1.00000000	2.52049368
1	.72599999	.97457229	1.52310130	.50000001	2.91805087
2	.57199999	.87792452	1.34596495	.24999999	2.72305492
3	.45199999	.75114976	1.11793983	.12500001	2.46601974
4	.37499999	.66048897	.94833683	.06200000	2.21210796
6	.28999999	.51514440	.69871904	.01500001	1.66339772
8	.23199999	.42362521	.53500838	.00300000	1.22587808
10	.18600000	.32083023	.37279426		.79980117
12	.15800000	.26632822	.28352677		.26632822

RUN NUMBER 747 HISTORIES 1000 ENERGY SET 2E ANGLE SET 2541 SLANT MFP 8.318111

INC. ENERGY .250000 COS. THETA 1.000000 CUTOFF EGY .000010 INC.FLX/NT 1.000000 INC.DOSE/NT 1.700000

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)
2.5400 2.5400 2.5400 2.5400 5.0800 5.0800
5.0800 5.0800

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1	.002000	.003244	.001240			
2	.002000	.002455	.000895	.001000	.001598	.000583
3	.006000	.006955	.002414	.004000	.006110	.002121
4	.021000	.038831	.013477	.022000	.036220	.012570
5	.011000	.025050	.010462	.016000	.021985	.009182
6	.017000	.027333	.014631	.018000	.037667	.020163
7	.067000	.124519	.087896	.131000	.245545	.173326
8	.032000	.063160	.052014	.570000	1.255762	1.034157
9						
10						

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.017000	.064935	.042485	.044000	.168067	.125570
2	.022000	.084034	.058802	.060000	.229183	.180855
3	.011000	.035014	.023902	.068000	.216450	.183212
4	.008000	.025465	.020866	.068000	.216450	.190285
5	.010000	.031831	.026021	.063000	.200535	.194480
6	.011000	.035014	.024951	.053000	.168704	.180916
7	.010000	.031831	.024915	.038000	.120957	.137238
8	.017000	.032468	.033581	.084000	.160428	.199727
9	.013000	.024828	.029409	.073000	.139419	.201494
10	.014000	.026738	.034445	.059000	.112681	.189972
11	.013000	.024828	.034594	.050000	.095493	.197416
12	.012000	.005730	.023624	.102000	.048701	.229458

(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.158000	.183029		.158000	.291547	.183029	.006944

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.762000	1.604886	1.252101	.058442	.346121	.076000	.004000

	MEAN ENERGY SCAT.TR.NT.	MEAN ENERGY REFL. NT.
1702.202618	.010987	.019174

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
748	.25000000	.86603000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
			.00370201	.04837153	.02423354
1	.03096904		.00963326	.04872885	.07771114
2	.01296014	.00689356	.02907183	.05099776	.12017085
3	.02623749		.03435654	.08832511	.15099625
4	.02635629	.01123270	.05599296	.10077905	.11350859
6			.01150577	.10686185	.13962903
8			.03799559	.08038795	.12321605
10	.01544660	.00501809	.03103413	.08643192	.09375029
12		.00112929	.00771634	.04638957	.02429889
INCHES	6	7	8	9	10
	.02047855	.21716902	1.17097350		
1	.05381916	.33851655	1.60224361		
2	.07814658	.52110644	1.66294198		
3	.12244970	.55621411	1.20797010		
4	.16023905	.71380336	.83439045		
6	.16893531	.59105127	.42067600		
8	.14707568	.45627464	.18584158		
10	.09238113	.24145504	.12025681		
12	.02826141	.08740659	.05995724		

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					
2					
3					
4					
6				.00243427	.00749869
8				.01027522	.01669454
10			.00115856	.02736047	.02688818
12		.00112929	.00771634	.04638957	.02429889
INCHES	6	7	8	9	10
1		.00453804	.48446289		
2		.01582943	.60467615		
3	.00177630	.05619961	.53863874		
4	.00892398	.11210304	.43750732		
6	.01216115	.14420457	.27966185		
8	.02295650	.15038022	.14514208		
10	.03724620	.11589756	.09503308		
12	.02826141	.08740659	.05995724		

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.15469441	1.83307737	1.15469441	2.57176539
1	.69799999	1.00745872	1.57534559	.51845779	2.68007940
2	.52399999	.85259916	1.30785069	.23209358	2.71438271
3	.41699999	.70053715	1.03983772	.10392249	2.29047180
4	.35299999	.60472211	.86492230	.04618777	2.06249024
6	.26999999	.45519807	.61564312	.00923756	1.44789677
8	.21999999	.34660325	.43839117	.00115470	1.03194617
10	.17600000	.30358406	.31760502		.68577399
12	.14700000	.25515933	.26915444		.25515933

RUN NUMBER 748 HISTORIES 1000 ENERGY SET 2E ANGLE SET 0φ SLANT MFP 9.604876

INC. ENERGY .250000 COS. THETA .866030 CUTOFF EGY .000010 INC.FLX/NT 1.154694 INC.DSE/NT 1.962980

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)
2.5400 2.5400 2.5400 2.5400 5.0800 5.0800
5.0800 5.0800

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1						
2	.001000	.001069	.000390			
3	.004000	.005537	.001921	.003000	.003206	.001113
4	.026000	.039311	.013643	.021000	.041891	.014539
5	.013000	.019918	.008319	.014000	.020987	.008765
6	.015000	.023764	.012721	.008000	.017735	.009493
7	.055000	.078904	.055697	.132000	.188075	.132759
8	.033000	.059132	.048697	.593000	1.014098	.835140
9						
10						

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.027000	.051566	.028971	.118000	.225363	.153064
2	.024000	.045836	.029607	.110000	.210084	.173019
3	.016000	.030558	.017853	.089000	.169977	.138886
4	.020000	.038197	.024240	.105000	.200535	.169633
5	.009000	.017189	.018941	.066000	.126050	.170527
6	.008000	.015279	.015829	.059000	.112681	.148321
7	.016000	.030558	.033032	.070000	.133690	.175282
8	.016000	.030558	.032498	.077000	.147059	.199359
9	.005000	.009549	.034472	.024000	.045836	.181740
10	.001000	.001910	.006906	.016000	.030558	.126090
11	.004000	.007639	.020775	.025000	.047746	.190488
12	.001000	.001910	.006906	.012000	.022918	.086899
(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.147000	.141388		.147000	.227634	.141388	.006519
NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.771000	1.285992	1.001808	.060487	.329921	.076000	.006000
MEAN ENERGY SCAT.TR.NT.			MEAN ENERGY REFL. NT.			
1702.205236			.011086			
			.019613			

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
749	.25000000	.70711000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
				.04147754	.01853101
1			.00990158	.06552903	.04927583
2	.00332281		.02646880	.08197168	.12559664
3	.00649336	.00646616	.02256014	.09889845	.13223000
4	.00451623	.02790032	.02499969	.07242773	.10826517
6			.02506760	.11077814	.18132052
8			.00363753	.09153576	.12348591
10		.00373610	.03063397	.06359948	.07356780
12		.00266382	.00135952	.04230816	.02806479
INCHES	6	7	8	9	10
	.02719002	.23563949	1.31148601		
1	.11373875	.44265838	1.77342709		
2	.12499131	.60415540	1.42628154		
3	.11836380	.51483406	1.04002092		
4	.14260072	.59413789	.78699295		
6	.15538829	.36396999	.32698694		
8	.10090096	.32493036	.11797710		
10	.06528874	.23659426	.06590948		
12	.01281115	.09652614	.02858413		

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					
2					
3					
4					.00414165
6				.00794568	.01697776
8				.01486983	.01577621
10				.02791163	.01222719
12		.00266382	.00135952	.04230816	.02806479
INCHES	6	7	8	9	10
1		.00269546	.56829552		
2		.02970962	.58079633		
3		.06088941	.47284298		
4	.00268946	.08910148	.42353136		
6	.01300725	.11716907	.21071958		
8	.01482897	.13623545	.09421040		
10	.01166034	.11531890	.05116050		
12	.01281115	.09652614	.02858413		

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.41420712	2.24505380	1.41420712	2.96625823
1	.65099999	1.10131866	1.71727106	.53032767	2.98485832
2	.47299999	.80849495	1.22708924	.19798899	2.59077718
3	.36399999	.60727116	.89750387	.07353876	2.01340565
4	.29999999	.54633389	.78124201	.02686993	1.78871065
6	.21199999	.36864776	.48220475	.00282841	1.16633991
8	.17100000	.27592086	.33675281		.76246762
10	.14000000	.21827856	.25067730		.53932984
12	.12000000	.21231770	.21811595		.21231770

RUN NUMBER	HISTORIES	ENERGY SET	ANGLE SET	SLANT MFP
749	1000	2E	0°	11.763532

INC. ENERGY	COS. THETA	CUTOFF EGY	INC.FLX/NT	INC.DSE/NT
.250000	.707110	.000010	1.414207	2.404152

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1						
2	.002000	.002260	.000824			
3	.001000	.000873	.000303			
4	.024000	.028721	.009968	.023000	.029329	.010179
5	.013000	.019058	.007960	.013000	.013103	.005473
6	.009000	.008733	.004675	.018000	.019226	.010292
7	.052000	.065868	.046495	.125000	.166623	.117616
8	.019000	.021348	.017581	.640000	.927365	.763712
9						
10						

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.024000	.045836	.019622	.125000	.238732	.134567
2	.015000	.028648	.017057	.099000	.189076	.125938
3	.016000	.030558	.015126	.094000	.179526	.118821
4	.025000	.047746	.023203	.113000	.215814	.148053
5	.006000	.011455	.008746	.075000	.143239	.154560
6	.010000	.019099	.017305	.077000	.147059	.160593
7	.006000	.011459	.009494	.066000	.126050	.135166
8	.009000	.017189	.015793	.077000	.147059	.161217
9	.001000	.001910	.006578	.030000	.057296	.195473
10	.003000	.005730	.011747	.025000	.047746	.154076
11	.004000	.007639	.017386	.023000	.043927	.146558
12	.001000	.001910	.005639	.015000	.028648	.097737
(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.120000	.087805		.120000	.146862	.087805	.005059
NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.819000	1.155647	.907272	.064939	.299996	.061000	
		MEAN ENERGY SCAT.TR.NT.		MEAN ENERGY REFL. NT.		
		.010541		.019823		
1702.205236						

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
750	.25000000	.34202000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
			.00591501	.01278600	.01555753
1			.00881063	.03487754	.03972179
2			.01786968	.03229356	.05675922
3			.00809215	.02806266	.03918910
4			.00656537	.04880310	.04232621
6			.01972230	.05387804	.07678349
8	.01959514	.00303718	.01768226	.04167122	.10010462
10	.01715938		.00414744	.03069925	.05193432
12	.00105056		.00135790	.03195769	.02776416

INCHES	6	7	8	9	10
	.02394054	.16283004	1.53937799		
1	.03455633	.33539455	1.70300025		
2	.06375972	.38347921	1.09790376		
3	.07917813	.40767876	.72861614		
4	.07254244	.42018331	.47245380		
6	.12351480	.38050190	.28791989		
8	.10574957	.30235232	.17356695		
10	.06652517	.23307458	.07118883		
12	.02037495	.07954075	.02063194		

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					
2					
3					
4					
6					.00293168
8				.01056488	.01275566
10	.00110911		.00135985	.02035588	.01606929
12	.00105056		.00135790	.03195769	.02776416

INCHES	6	7	8	9	10
1		.00282202	.78260370		
2		.02127779	.53254133		
3		.07538284	.41872086		
4	.00137729	.08660632	.30542949		
6	.00359092	.10313447	.19943122		
8	.01217081	.10788719	.10703218		
10	.00541398	.11380610	.05250015		
12	.02037495	.07954075	.02063194		

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	2.92380562	4.64154142	2.92380562	4.58955335
1	.49699999	1.16844425	1.81141991	.38301853	2.53937962
2	.33899999	.60352381	.91191474	.04970470	1.70176985
3	.27299999	.49995132	.72504182	.00584760	1.29666455
4	.22999999	.39341309	.55680873		1.06287422
6	.17900000	.30908829	.41751459		.94232042
8	.14600000	.25041072	.31095124		.76375925
10	.12900000	.21061435	.24408060		.47472898
12	.10800000	18267794	.18575098		.18267794

RUN NUMBER 750	HISTORIES 1000	ENERGY SET 2E	ANGLE SET 84	SLANT MFP 24.320540
INC. ENERGY .250000	COS. THETA .342020	CUTOFF EGY .000010	INC.FLX/NT 2.923806	INC.DSE/NT 4.970469

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1	.001000	.000349	.000134			
2						
3	.001000	.000422	.000146	.001000	.002023	.000702
4	.018000	.011723	.004069	.008000	.004373	.001518
5	.012000	.009971	.004164	.010000	.005321	.002222
6	.010000	.006818	.003650	.013000	.008188	.004383
7	.052000	.028159	.019877	.095000	.055691	.039311
8	.014000	.007686	.006330	.716000	.526498	.433587
9						
10						

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.015000	.028648	.006304	.117000	.223453	.062031
2	.015000	.028648	.007250	.113000	.215814	.072360
3	.027000	.051566	.013556	.102000	.194805	.065296
4	.017000	.032468	.008255	.096000	.183346	.061033
5	.005000	.009549	.003386	.067000	.127960	.069978
6	.008000	.015279	.007020	.089000	.169977	.090338
7	.006000	.011459	.004291	.061000	.116501	.061412
8	.006000	.011459	.004992	.086000	.164247	.086884
9	.001000	.001910	.003182	.034000	.064935	.107730
10	.002000	.003820	.004796	.025000	.047746	.079093
11	.004000	.007639	.005909	.025000	.047746	.076138
12	.002000	.003820	.004341	.028000	.053476	.087729
(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.108000	.038370		.108000	.065130	.038370	.004618
NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.843000	.602094	.481723	.070759	.246202	.047000	.002000
		MEAN ENERGY SCAT.TR.NT.		MEAN ENERGY REFL. NT.		
1702.205236		.010691		.020984		

RUN NUMBER 750 HISTORIES 1000 ENERGY SET 2E ANGLE SET 04 SLANT MFP 24.320540

INC. ENERGY .250000 COS. THETA .342020 CUTOFF EGY .000010 INC.FLX/NT 2.923806 INC.DSE/NT 4.970469

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)
 2.5400 2.5400 2.5400 2.5400 5.0800 5.0800
 5.0800 5.0800

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO. FLX. REFL. FACTOR	DOSE REFL. FACTOR
1	.001000	.000349	.000134			
2						
3	.001000	.000422	.000146	.001000	.002023	.000702
4	.018000	.011723	.004069	.008000	.004373	.001518
5	.012000	.009971	.004164	.010000	.005321	.002222
6	.010000	.006818	.003650	.013000	.008188	.004383
7	.052000	.028159	.019877	.095000	.055691	.039311
8	.014000	.007686	.006330	.716000	.526498	.433587
9						
10						

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.015000	.028648	.006304	.117000	.223453	.062031
2	.015000	.028648	.007250	.113000	.215814	.072360
3	.027000	.051566	.013556	.102000	.194805	.065296
4	.017000	.032468	.008255	.096000	.183346	.061033
5	.005000	.009549	.003386	.067000	.127960	.069978
6	.008000	.015279	.007020	.089000	.169977	.090338
7	.006000	.011459	.004291	.061000	.116501	.061412
8	.006000	.011459	.004992	.086000	.164247	.086884
9	.001000	.001910	.003182	.034000	.064935	.107730
10	.002000	.003820	.004796	.025000	.047746	.079093
11	.004000	.007639	.005909	.025000	.047746	.076138
12	.002000	.003820	.004341	.028000	.053476	.087729

(S+U) NO. TRAN. FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT. NO. FLX. TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.108000	.038370		.108000	.065130	.038370	.004618

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.843000	.602094	.481723	.070759	.246202	.047000	.002000

MEAN ENERGY SCAT. TR. NT.	MEAN ENERGY REFL. NT.
.010691	.020984

1702.205236

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
751	.50000000	1.00000000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1		.00144481	.00230661	.01132199	.00891410
2		.00784834	.01308382	.01802015	.02472089
3		.00398212	.01689099	.02714848	.04951801
4	.00639640	.00888167	.02323338	.05756608	.04414273
6	.01097780	.04615398	.05357338	.03648549	
8	.01029249	.01636421	.03471906	.07619147	.04924609
10			.00282429	.04498219	.05494743
12				.02908969	.02588606
				.01234902	.00728647
INCHES	6	7	8	9	10
1	.00981610	.06693977	.11607710	.39820678	.76176220
2	.02369749	.13822682	.20603492	.79255115	1.39952502
3	.05085688	.19277468	.29065947	.99979329	1.60289497
4	.05419310	.24723748	.27197273	1.29349218	1.20843425
6	.05270505	.25605400	.31452360	1.08425613	.79474507
8	.05920397	.25801294	.34593898	1.01714524	.48149373
10	.03768282	.22642402	.32388053	.71749708	.14335620
12	.05455449	.21340950	.19870595	.45733350	.05537366
	.02848529	.05712436	.06326444	.15886903	.00484273

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					
2					
3					
4					
6				.00114771	.00320608
8			.00109859	.00146267	.00489026
10				.00776257	.00828361
12				.01234902	.00728647
INCHES	6	7	8	9	10
1				.01073348	.48392735
2				.07522083	.64565589
3			.00954704	.14993906	.57152247
4		.00156226	.00646985	.24818343	.39043417
6	.00135169	.00817926	.03251447	.36301083	.23324363
8	.00278125	.04008973	.07996806	.32866830	.09939066
10	.01224525	.06087424	.07915272	.26756725	.03240936
12	.02848529	.05712436	.06326444	.15886903	.00484273

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.00000000	2.40000000	1.00000000	2.31370305
1	.80199999	1.01666083	2.39234972	.52199999	3.14570860
2	.65599999	.99287672	2.27794684	.27200000	3.44651888
3	.55199999	.87300857	1.92340348	.14200001	3.34227193
4	.47399999	.72064971	1.52914878	.07400000	2.72777478
6	.37299999	.66265367	1.29390049	.02000001	2.36929350
8	.30599999	.56334952	.99727194	.00500000	1.56688706
10	.24599999	.46929500	.76116424	.00100001	1.03535285
12	.20099999	.33222133	.49479750		.33222133

RUN NUMBER 751 HISTORIES 1000 ENERGY SET 2E ANGLE SET 2541 SLANT MFP 7.798469

INC. ENERGY 5.00000 COS. THETA 1.000000 CUTOFF EGY 0.000010 INC.FLX/NT 1.000000 INC.DSE/NT 2.400000

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)
 2.5400 2.5400 2.5400 2.5400 5.0800 5.0800
 5.0800 5.0800

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1						
2				.001000	.001445	.000373
3				.002000	.002307	.000567
4	.007000	.014601	.003589	.006000	.011322	.002783
5	.005000	.007137	.002111	.007000	.008914	.002637
6	.017000	.029762	.011285	.008000	.009816	.003722
7	.036000	.062411	.031205	.041000	.066940	.033470
8	.040000	.067209	.039205	.053000	.116077	.067712
9	.092000	.166399	.124800	.232000	.398207	.298655
10	.004000	.004770	.004373	.392000	.761762	.698282

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.018000	.068755	.041031	.057000	.217723	.166696
2	.016000	.061115	.042058	.066000	.252101	.210154
3	.018000	.057296	.038763	.070000	.222816	.203454
4	.020000	.063662	.042231	.063000	.200535	.182116
5	.022000	.070028	.057135	.057000	.181436	.185032
6	.016000	.050929	.045033	.062000	.197352	.210692
7	.009000	.028648	.024738	.054000	.171887	.192235
8	.020000	.038197	.036385	.080000	.152788	.195441
9	.019000	.036287	.044171	.066000	.126050	.189215
10	.020000	.038197	.049594	.056000	.106952	.192117
11	.011000	.021008	.034805	.051000	.097403	.213645
12	.012000	.005730	.020593	.060000	.028648	.138386

(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.201000	.216569		.201000	.352290	.216569	.009037

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.742000	1.376789	1.108201	.053653	.373077	.053000	.004000

2402.202618	MEAN ENERGY SCAT.TR.NT.	MEAN ENERGY REFL. NT.
	.022481	.036154

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
752	.50000000	.86603000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1			.00196251	.01060051	.00940452
2			.01040032	.01995107	.02728594
3			.00119873	.03901071	.04938533
4			.00184797	.03630736	.04702371
6	.00528420	.00219949	.00251412	.03584195	.08719048
8	.00732152	.00339971	.02799567	.06552743	.10565682
10		.00396792	.05239764	.04533761	.04812894
12		.00210265	.01092928	.04953463	.06123335
			.00138402	.01955934	.00649002
INCHES	6	7	8	9	10
1	.00574501	.05146801	.07108250	.41769998	.88561248
2	.03110435	.08631125	.14430403	.82381335	1.55883966
3	.03685338	.09131166	.21329399	1.08263010	1.39394550
4	.05056158	.17638099	.21350283	1.12668051	1.00554579
6	.04455838	.21928750	.26680838	1.03612587	.73504314
8	.06073144	.21716966	.28764636	.76617349	.34794596
10	.05375957	.28183307	.18185955	.49819143	.15706813
12	.03839697	.14854528	.12697552	.33431443	.04992979
	.01075561	.05601583	.03345639	.14813031	.01998658

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					
2					
3					
4					
6					
8				.00313039	.00137083
10				.00798691	.00105091
12		.00210265	.00138402	.01955934	.00649002
INCHES	6	7	8	9	10
1				.00904889	.56883514
2				.05315540	.60467315
3		.00103751		.16417348	.52142299
4		.00295767	.01361170	.20829600	.40978064
6		.01402680	.03217496	.28406276	.20108629
8	.00150893	.04936275	.05310168	.24708196	.07940757
10	.00894234	.04995246	.04908511	.19599218	.03458618
12	.01075561	.05601583	.03345639	.14813031	.01998658

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.15469441	2.77126658	1.15469441	2.55080024
1	.77599999	1.12289979	2.64530946	.54501575	3.24702573
2	.61099999	.91532540	2.09540151	.25749686	3.16512626
3	.50199999	.80787690	1.77945675	.12124291	2.77909367
4	.43399999	.69122603	1.46399945	.05658002	2.48394985
6	.32999999	.54405245	1.06149928	.01270163	1.89903214
8	.25999999	.43727350	.76713604	.00230939	1.33160657
10	.21399999	.34759610	.57214461		.82382718
12	.18000000	.29788074	.45318512		.29788074

RUN NUMBER 752	HISTORIES 1000	ENERGY SET 2E	ANGLE SET 0φ	SLANT MFP 9.004849
INC. ENERGY .500000	COS. THETA .866030	CUTOFF EGY .000010	INC.FLX/NT 1.154694	INC.DSE/NT 2.771267

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1						
2	.001000	.001700	.000439			
3	.001000	.001069	.000263	.001000	.001700	.000418
4	.011000	.022019	.005413	.008000	.009180	.002257
5	.005000	.005606	.001659	.004000	.008145	.002409
6	.007000	.009820	.003724	.005000	.004975	.001887
7	.030000	.047350	.023675	.029000	.044573	.022286
8	.023000	.030153	.017589	.040000	.061560	.035910
9	.090000	.135047	.101285	.230000	.361741	.271305
10	.012000	.019034	.017447	.437000	.766967	.703053

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.033000	.063025	.034432	.110000	.210084	.152292
2	.016000	.030558	.019636	.098000	.187166	.154148
3	.032000	.061115	.042521	.110000	.210084	.184798
4	.034000	.064935	.047887	.109000	.208174	.177161
5	.012000	.022918	.023141	.064000	.122231	.175268
6	.008000	.015279	.015297	.052000	.099312	.137669
7	.015000	.028648	.027334	.065000	.124141	.179339
8	.017000	.032468	.037464	.068000	.129870	.180962
9	.002000	.003820	.014675	.014000	.026738	.122292
10	.007000	.013369	.048101	.023000	.043927	.182256
11	.002000	.003820	.012229	.022000	.042017	.182623
12	.002000	.003820	.004810	.019000	.036287	.156534

(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.180000	.171493		.180000	.271797	.171493	.008576

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.754000	1.258840	1.039525	.056692	.347295	.062000	.004000

	MEAN ENERGY SCAT.TR.NT.	MEAN ENERGY REFL. NT.
2402.205236	.023824	.037594

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
753	.50000000	.70711000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00533131		.00102151	.01537253	.00908401
2	.00927086		.00168090	.02676818	.03952165
3	.01082213		.01387658	.02535997	.02451379
4	.01836106	.00493543	.00595659	.04288443	.03264008
6	.00648992	.00204482	.02356363	.02091798	.06670743
8	.01240398		.03223303	.05198229	.07074536
10			.00598398	.04616113	.07567681
12			.00839860	.04566289	.02079619
				.01377024	.01788057
INCHES	6	7	8	9	10
1	.01380753	.03683897	.08334600	.41578151	.89323148
2	.02954879	.08739980	.14905321	.77563079	1.52320825
3	.05586738	.14570645	.18181190	1.09188120	1.38943562
4	.06927097	.20081152	.25786632	1.10927047	1.00235333
6	.05448487	.19134055	.27767532	1.13243896	.66280515
8	.03796906	.17061502	.29185588	.76934794	.27142196
10	.03788218	.21129820	.25141017	.52778469	.07237986
12	.04485191	.12830203	.17524460	.34647020	.03398158
	.01212266	.05378867	.04835972	.12842298	.00582273

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					
2					
3					
4					
6					
8				.00477499	
10				.01510770	.00179863
12				.01377024	.01788057
INCHES	6	7	8	9	10
1				.00938662	.61942490
2				.06792920	.65609966
3				.20863883	.53196836
4		.00283835	.00652193	.26678068	.36584815
6		.01829522	.02283541	.29281932	.16190429
8	.00216050	.02165495	.04804975	.27932898	.04332377
10	.00390555	.03948010	.04872394	.21135755	.01774600
12	.01212266	.05378867	.04835972	.12842298	.00582273

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.41420712	3.39409710	1.41420712	2.86607082
1	.73199999	1.19308016	2.80940306	.56426864	3.20241153
2	.56899999	.94888779	2.16317757	.22485892	3.16258269
3	.47199999	.82970224	1.80319418	.08909506	2.82097088
4	.39699999	.67734428	1.40727876	.03535519	2.48858556
6	.30399999	.50151106	.96181028	.00565682	1.71036210
8	.22999999	.39929295	.70214945		1.24098100
10	.19499999	.33811947	.55418133		.80370800
12	.15600000	.28016758	.41114788		.28016758

RUN NUMBER 753	HISTORIES 1000	ENERGY SET 2E	ANGLE SET 0°	SLANT MFP 11.028651
INC. ENERGY .500000	COS. THETA .707110	CUTOFF EGY .000010	INC.FLX/NT 1.414207	INC.DSE/NT 3.394097

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1						
2						
3						
4	.011000	.010178	.002502	.001000	.000722	.000178
5	.004000	.011141	.003296	.008000	.010870	.002672
6	.008000	.009041	.003428	.005000	.006423	.001900
7	.029000	.037424	.018712	.009000	.009763	.003702
8	.024000	.036521	.021304	.027000	.026049	.013025
9	.076000	.089150	.066862	.048000	.058935	.034379
10	.004000	.004521	.004144	.238000	.294003	.220502
				.457000	.631613	.578978

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.029000	.055386	.024699	.120000	.229183	.133738
2	.024000	.045836	.024921	.109000	.208174	.145540
3	.023000	.043927	.023261	.102000	.194805	.138888
4	.022000	.042017	.022768	.118000	.225363	.160615
5	.013000	.024828	.024416	.064000	.122231	.139605
6	.006000	.011459	.010060	.077000	.147059	.162806
7	.012000	.022918	.017227	.069000	.131780	.146982
8	.014000	.026738	.022991	.067000	.127960	.145447
9	.005000	.009549	.020336	.013000	.024828	.084540
10	.003000	.005730	.015976	.015000	.028648	.099152
11	.002000	.003820	.008354	.017000	.032468	.120487
12	.003000	.005730	.014645	.022000	.042017	.155767

(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.156000	.120248		.156000	.197975	.120248	.007075

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.793000	1.038379	.855336	.059408	.335148	.048000	.003000

	MEAN ENERGY SCAT.TR.NT.	MEAN ENERGY REFL. NT.
2402.205236	.022676	.037458

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
754	.50000000	.34202000	.00001010	2E

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.01046550	.00137334		.00493601	.01180253
2		.00138481		.00475860	.00822253
3	.01217050	.00122567	.00270957	.01647416	.00404335
4	.01552596	.00238257	.01778109	.00894613	.02516286
6	.00303636		.00145074	.02660458	.01300008
8			.02481531	.02496162	.02195320
10			.02068913	.00860149	.04139168
12			.00236835	.00383188	.05047910
					.00507703
INCHES	6	7	8	9	10
1	.00196251	.03029551	.07754101	.34226554	1.31777300
2	.01744564	.06821182	.08351814	.55401007	1.59773152
3	.01477139	.08747035	.14891188	.70384128	1.05352883
4	.01209391	.08676188	.16595794	.74115980	.63478750
6	.02554621	.07906781	.16992126	.79089780	.41570636
8	.03895986	.08920531	.16599270	.56147803	.12270853
10	.02116754	.08092656	.10265785	.31697015	.05134240
12	.01080108	.08647974	.10114049	.18612302	.01097793
	.00566636	.03487102	.03625218	.09032786	.00605714

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					
2					
3					
4					
6					
8					.00103807
10					.00911962
12			.00236835	.00383188	.00507703
INCHES	6	7	8	9	10
1				.01487866	.80100747
2				.06889003	.63195919
3			.00527695	.14931523	.36769272
4			.00859139	.18921918	.24294072
6	.00267846	.00870140	.02001343	.24551573	.08682694
8	.00219386	.02252981	.01890760	.17925641	.03193373
10	.00320836	.03519274	.03488005	.12752969	.00936091
12	.00566636	.03487102	.03625218	.09032786	.00605714

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	2.92380562	7.01713350	2.92380562	4.64046512
1	.56399999	1.25153316	2.92203252	.43564706	2.78138421
2	.39999999	.76517293	1.71989267	.06432373	2.08696780
3	.32199999	.53105632	1.13304945	.00877143	1.70727521
4	.26899999	.44075129	.90193450		1.53877527
6	.20399999	.36373597	.68003862		1.03138931
8	.16100000	.25585949	.44726106		.66423311
10	.13400000	.21929137	.35257543		.47529199
12	.11500000	.18445181	.27872244		.18445181

RUN NUMBER 754	HISTORIES 1000	ENERGY SET 2E	ANGLE SET 0φ	SLANT MFP 22.801207
INC. ENERGY .500000	COS. THETA .342020	CUTOFF EGY .000010	INC.FLX/NT 2.923806	INC.DSE/NT 7.017133

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1						
2						
3	.002000	.000771	.000190			
4	.003000	.001443	.000355	.004000	.001688	.000415
5	.002000	.002372	.000702	.004000	.004037	.001194
6	.004000	.002187	.000829	.001000	.000671	.000254
7	.019000	.012353	.006176	.020000	.010362	.005181
8	.025000	.012036	.007021	.039000	.026521	.015470
9	.057000	.031549	.023662	.182000	.117062	.087796
10	.003000	.003116	.002857	.605000	.450705	.413146

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.026000	.049656	.010423	.110000	.210084	.063333
2	.016000	.030558	.008796	.108000	.206264	.070856
3	.021000	.040107	.010687	.116000	.221543	.078859
4	.013000	.024828	.006915	.125000	.238732	.085237
5	.008000	.015279	.006148	.063000	.120321	.068428
6	.007000	.013369	.005982	.069000	.131780	.074838
7	.008000	.015279	.006362	.070000	.133690	.077188
8	.009000	.017189	.007259	.076000	.145149	.083490
9	.001000	.001910	.002898	.017000	.032468	.059566
10	.002000	.003820	.004830	.026000	.049656	.083247
11				.031000	.059205	.104643
12	.004000	.007639	.009514	.044000	.084034	.150041
(S+U) NO. TRAN. FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.115000	.041791		.115000	.065827	.041791	.005339
NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.855000	.611045	.523457	.069542	.251172	.027000	.003000
		MEAN ENERGY SCAT.TR.NT.		MEAN ENERGY REFL. NT.		
2402.205236		.023212		.040668		

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
780	1.0000000C	1.00000000	.00001010	2D

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00118680	.11048511	.06364799	.13006753	.45020743
2	.00246528	.14853304	.15331143	.21690497	.69152887
3	.01183523	.26717431	.20902804	.27850083	.75081458
4	.08576459	.31480694	.34540011	.31746059	.65519001
6	.03249375	.35953664	.28532135	.23852868	.58277372
8	.04009785	.35489915	.31496218	.21126599	.33252932
10	.06710695	.40787753	.31085914	.21115784	.24952211
12	.00364988	.25809038	.15769047	.13531428	.10151074
		.10636082	.03327963	.01922142	.04125856
INCHES	6	7	8	9	10
1	.00363580	.03500999	.01960461	.09981657	.46538502
2	.00923053	.12865367	.04400357	.20689692	.77503070
3	.01138454	.12171430	.07258173	.25462532	.82304176
4	.02006817	.12880267	.06849829	.33062627	.68877091
6	.02678997	.11553016	.12324197	.31797742	.62371886
8	.02089024	.13208493	.09784022	.37010252	.36909049
10	.02681887	.07921796	.05981401	.21737497	.17313552
12	.02906182	.07491644	.04766717	.11203864	.09902491
	.00511024	.03574813	.01013498	.03127146	.03038131

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1				.00407886	.14505357
2			.00237870	.00699609	.19967812
3			.01520158	.03729408	.21389367
4		.01130101	.03038003	.02829361	.22647807
6		.03224938	.05740968	.04606577	.16168251
8	.00131412	.08301480	.04392999	.04258569	.11339340
10		.09647528	.03737599	.04336776	.05719956
12		.10636082	.03327963	.01922142	.04125856
INCHES	6	7	8	9	10
1					.26467984
2				.00469434	.36189611
3				.01615793	.35909825
4				.04411458	.31122763
6		.00228279	.00219647	.07809921	.18531230
8	.00107853	.02053700	.01378131	.06375813	.10490891
10	.00749726	.02780232	.01370285	.05079766	.06889035
12	.00511024	.03574813	.01013498	.03127146	.03038131

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	1TL.FLX/NT. REGION BDS.
1	1.00000000	1.00000000	3.79999999	1.00000000	2.31085753
2	.80899999	1.01181227	3.43378967	.59800001	2.97455898
3	.67399999	.93264336	2.95231789	.35700001	3.15770064
4	.56699999	.85464551	2.46885029	.21300000	3.16838855
6	.48499999	.77879493	2.06571247	.12700000	2.83291252
8	.36899999	.61029810	1.36609243	.04500000	2.28876290
10	.31199999	.50430189	.93767381	.01599999	1.81888492
12	.24099999	.40810903	.68926311	.00500000	1.02396472
	.19700000	.31476656	.44484773	.00200000	.31476656

RUN NUMBER 760	HISTORIES 1000	ENERGY SET 20	ANGLE SET 2541	SLANT MFP 6.173712
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INC. ENERGY 1.000000	COS. THETA 1.000000	CUTOFF EGY .000010	INC.FLX/NT 1.000000	INC.DSE/NT 3.800000
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SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)				
2.5400	2.5400	2.5400	2.5400	5.0800
5.0800	5.0800			5.0800

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1				.001000	.001187	.000200
2	.061000	.114586	.017791	.054000	.110485	.017154
3	.020000	.038303	.007157	.031000	.063648	.011892
4	.013000	.019179	.004593	.064000	.130067	.031148
5	.025000	.042185	.013321	.232000	.450207	.142171
6	.004000	.005099	.001878	.003000	.003636	.001339
7	.022000	.037508	.017767	.032000	.055010	.026057
8	.008000	.010225	.005920	.011000	.019605	.011350
9	.023000	.031397	.023135	.055000	.099817	.073549
10	.019000	.033271	.029769	.240000	.465385	.416397

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.021000	.080214	.037271	.065000	.248281	.136580
2	.018000	.068755	.027344	.064000	.244461	.148290
3	.025000	.079577	.034312	.061000	.194169	.101352
4	.017000	.054113	.025519	.065000	.206901	.138850
5	.017000	.054113	.034383	.053000	.168704	.113849
6	.015000	.047746	.021636	.053000	.168704	.122301
7	.013000	.041380	.022595	.057000	.181436	.122368
8	.016000	.030558	.019415	.079000	.150879	.128961
9	.017000	.032468	.021727	.061000	.116501	.117818
10	.012000	.022918	.014807	.054000	.103132	.113824
11	.013000	.024828	.018274	.035000	.066845	.092147
12	.011000	.005252	.010531	.076000	.036287	.110545
(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.197000	.123331	.002000	.195000	.331752	.121331	.004818
NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.723000	1.399047	.731258	.030866	.641144	.074000	.006000
		MEAN ENERGY SCAT.TR.NT.		MEAN ENERGY REFL. NT.		
3803.402618		.024710		.042692		

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
755	1.00000000	.86603000	.00001010	2D

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00383524	.09567253	.08093301	.07865450	.39779852
2	.01077450	.14272078	.19035283	.23663792	.63837701
3	.03358420	.25299407	.35263731	.25525463	.69647447
4	.10610797	.33240013	.32757626	.29754289	.66206102
6	.06276573	.42914674	.32689427	.36470427	.53046413
8	.03466705	.34517997	.39774121	.24634452	.36752999
10	.05550897	.31281758	.27093403	.17518499	.25162703
12	.00389742	.26596115	.11770920	.10063048	.09537463
		.07245787	.03109965	.02737695	.03401830
INCHES	6	7	8	9	10
1	.00785001	.04415800	.02713703	.11709200	.54754300
2	.00673312	.09581679	.05125889	.28928513	.84536950
3	.01607379	.08824056	.07906259	.35162904	.80227338
4	.01997512	.08814624	.10259037	.39038814	.66832438
6	.01712765	.08748410	.09255413	.32010379	.58665466
8	.02369020	.11994414	.05333676	.24505508	.35665698
10	.01519121	.09422471	.04875203	.24193352	.18466920
12	.02075435	.06708681	.06214553	.15757343	.05916301
	.01292218	.03038723	.01138475	.04945468	.02449015

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1			.00331288	.00702197	.13737551
2			.01553438	.01231027	.21007497
3		.00165669	.01781803	.05064644	.24840556
4		.00509267	.02044723	.05363281	.24682380
6		.01604795	.03587770	.06023464	.15979998
8		.04373092	.04961514	.04892835	.12293842
10	.00243568	.09928432	.03420389	.04405698	.06834222
12	.00389742	.07245787	.03109965	.02737695	.03401830
INCHES	6	7	8	9	10
1					.32658957
2				.01480147	.37148830
3				.02304659	.36196914
4				.04562364	.29236331
6		.00573476	.00350171	.05933645	.21461147
8		.01496547	.00721960	.07170967	.10902380
10	.00399132	.02116512	.02384355	.06220657	.04210411
12	.01292218	.03038723	.01138475	.04945468	.02449015

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.15469441	4.38783875	1.15469441	2.49759042
1	.78599999	1.11169124	3.81008817	.63739132	3.13777853
2	.64899999	.97639118	3.01962037	.35218179	3.25759614
3	.55399999	.89753111	2.48387890	.19398867	3.11657740
4	.47999999	.77021535	1.95944252	.10623188	2.96747360
6	.35599999	.58747612	1.35805769	.03233144	2.25057602
8	.27499999	.47736893	.90762144	.00923756	1.63923890
10	.21499999	.38394315	.60325984	.00230939	1.00421695
12	.18100000	.29748919	.45300307		.29748919

RUN NUMBER 755	HISTORIES 1000	ENERGY SET 20	ANGLE SET 04	SLANT MFP 7.128750
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INC. ENERGY 1.000000	COS. THETA .866030	CUTOFF EGY .000010	INC.FLX/NT 1.154694	INC.DSE/NT 4.387839
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SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1	.002000	.003399	.000572			
2	.041000	.066866	.010382	.057000	.082855	.012864
3	.019000	.030016	.005608	.042000	.070090	.013096
4	.017000	.026086	.006247	.049000	.068117	.016312
5	.023000	.028444	.008982	.210000	.344505	.108791
6	.007000	.011613	.004279	.004000	.006798	.002505
7	.019000	.028039	.013282	.025000	.038242	.018115
8	.007000	.012428	.007195	.015000	.023501	.013606
9	.029000	.045940	.033850	.065000	.101405	.074720
10	.017000	.024009	.021482	.263000	.474189	.424274

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.030000	.057296	.021004	.104000	.198625	.094477
2	.029000	.055386	.027081	.103000	.196715	.115135
3	.030000	.057296	.023816	.101000	.192895	.110629
4	.027000	.051566	.023939	.096000	.183346	.109104
5	.012000	.022918	.010942	.061000	.116501	.102820
6	.005000	.009549	.007722	.067000	.127960	.116239
7	.018000	.034377	.020620	.074000	.141329	.133067
8	.016000	.030558	.022192	.053000	.101222	.086394
9	.005000	.009549	.019618	.023000	.043927	.141344
10				.011000	.021008	.075177
11	.004000	.007639	.015911	.016000	.030558	.104038
12	.005000	.009549	.020828	.021000	.040107	.118456

(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.181000	.111879		.181000	.276841	.111879	.004945

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.730000	1.209704	.684283	.033310	.617441	.082000	.007000

	MEAN ENERGY SCAT.TR.NT.	MEAN ENERGY REFL. NT.
3803.405236	.027320	.045630

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
761	1.00000000	.70711000	.00001010	2D

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
	.00225551	.07705052	.03845253	.12715249	.46316500
1	.00222677	.11238310	.15930475	.24076694	.65554724
2	.01490256	.14305355	.18050224	.19099679	.59948684
3	.03793406	.16666902	.22536817	.27390020	.56709301
4	.03331237	.28705623	.28465767	.25420414	.42250525
6	.06337347	.36923646	.23942735	.26389418	.26322714
8	.00579821	.25249816	.20951752	.10905672	.18321075
10	.01815446	.14687367	.12739100	.09192890	.07036547
12	.00364535	.09403757	.02228570	.02444645	.02558117

INCHES	6	7	8	9	10
	.01602053	.03428604	.02512150	.12185352	.69488251
1	.01925372	.05838004	.04121213	.20842968	1.03008359
2	.02377239	.06964617	.05631418	.34722457	.90674301
3	.03319465	.10395731	.09838637	.28767835	.67345746
4	.04318879	.10550842	.08622926	.28008331	.48507766
6	.02739047	.08774762	.10145567	.31177012	.25866921
8	.02755150	.09774999	.09466131	.20222909	.15676569
10	.01923998	.07589541	.04359397	.11871355	.08492624
12	.00811990	.02423033	.00759740	.05767540	.02250323

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1			.00150510	.00112823	.10968669
2			.00335340	.02384548	.20895668
3			.01455442	.04750493	.20520331
4		.00143707	.03320069	.04723964	.20501785
6		.03949570	.04212761	.05262676	.13494560
8		.05001614	.04823524	.03360198	.08157623
10		.06987841	.04764923	.03263929	.04168344
12	.00364535	.09403757	.02228570	.02444645	.02558117

INCHES	6	7	8	9	10
1					.41654695
2				.01144860	.47907833
3				.03984791	.35475939
4			.00465936	.06327558	.29928216
6	.00159463	.00932932	.00414412	.08937939	.16548475
8	.00802674	.01036352	.01387571	.08256194	.09958263
10	.00945537	.02363968	.01173932	.05916481	.05725071
12	.00811990	.02423033	.00759740	.05767540	.02250323

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.41420712	5.37398707	1.41420712	2.91561858
1	.74099999	1.21192901	4.27169963	.68306205	3.21065001
2	.59399999	1.05619275	3.32271507	.32951025	2.86215256
3	.48399999	.82026116	2.31329196	.15839119	2.62602980
4	.41699999	.73047953	1.87501891	.07636717	2.35819029
6	.31299999	.55609836	1.19175359	.01697049	2.00316217
8	.24899999	.43066853	.84589915	.00282841	1.34186737
10	.20399999	.35310024	.60464112		.79708266
12	.16400000	.29012250	.43603282		.29012250

RUN NUMBER 761	HISTORIES 1000	ENERGY SET 2D	ANGLE SET 00	SLANT MFP 8.730907
INC. ENERGY 1.000000	COS. THETA .707110	CUTOFF EGY .000010	INC.FLX/NT 1.414207	INC.DSE/NT 5.373987

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)				
2.5400	2.5400	2.5400	2.5400	5.0800
5.0800	5.0800			5.0800

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO. FLX. REFL. FACTOR	DOSE REFL. FACTOR
1	.002000	.002260	.000381	.002000	.001595	.000269
2	.043000	.070010	.010870	.044000	.054483	.008459
3	.017000	.016143	.003016	.022000	.027190	.005080
4	.016000	.016537	.003960	.053000	.089911	.021531
5	.017000	.018139	.005728	.228000	.327509	.103424
6	.005000	.005243	.001932	.007000	.011328	.004174
7	.013000	.017229	.008161	.017000	.024244	.011484
8	.006000	.005300	.003068	.011000	.017764	.010284
9	.032000	.038642	.028473	.066000	.086164	.063489
10	.013000	.015898	.014225	.308000	.491358	.439636

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.028000	.053476	.016362	.123000	.234912	.094733
2	.022000	.042017	.015533	.081000	.154698	.076685
3	.023000	.043927	.016305	.093000	.177616	.085644
4	.027000	.051566	.017980	.093000	.177616	.091617
5	.019000	.036287	.022521	.071000	.135600	.103048
6	.013000	.024828	.012603	.066000	.126050	.098689
7	.010000	.019099	.009478	.052000	.099312	.079851
8	.010000	.019099	.009025	.072000	.137510	.115456
9	.004000	.007639	.013412	.021000	.040107	.100313
10	.001000	.001910	.001240	.026000	.049656	.133716
11	.005000	.009549	.010847	.029000	.055386	.136113
12	.002000	.003820	.007126	.031000	.059205	.159593

(S+U) NO. TRAN. FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT. NO. FLX. TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.164000	.079814		.164000	.205401	.079814	.004444

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.758000	1.131546	.667830	.037363	.581913	.073000	.005000

MEAN ENERGY SCAT. TR. NT.	MEAN ENERGY REFL. NT.
.027097	.049292

3803.405236

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
774	1.00000000	.34202000	.00001010	20

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
	.00196251	.07791101	.05065249	.10983249	.51243702
1	.02304696	.10654955	.15951111	.21107317	.60036773
2	.01956957	.12756154	.14863733	.24702625	.52506145
3	.04279855	.17782642	.21432224	.23892218	.37028022
4	.03643044	.24333645	.26176528	.20589888	.25680858
6	.03263751	.21008747	.26329797	.16360263	.18015157
8	.02349329	.17914287	.11221067	.10567136	.09129927
10		.11282742	.09290991	.05232777	.06104683
12		.05133025	.02930914	.02196437	.02820375

INCHES	6	7	8	9	10
	.00306451	.03123203	.01601004	.09353400	.86954449
1	.00318523	.06815366	.02011345	.15892466	1.13706394
2	.00803990	.08423346	.02361733	.25667748	.77444632
3	.01577259	.07511366	.03581309	.24233859	.52497726
4	.01891489	.07841282	.03538039	.26096617	.40557995
6	.03563131	.09820454	.07935431	.20899453	.19447894
8	.02372309	.11343876	.07855360	.14088933	.08563366
10	.01647234	.04218875	.03242267	.09854092	.03389796
12	.00976957	.02742680	.01348209	.03353383	.01496597

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1			.00154518	.01299960	.20816415
2			.00870831	.03369811	.24572198
3			.01861532	.04362368	.21210119
4		.00693519	.02115003	.04099969	.15102016
6		.01671897	.04647541	.04689967	.08932481
8		.05042557	.01733747	.04590518	.04051254
10		.04268722	.01541675	.02902249	.03565625
12		.05133025	.02930914	.02196437	.02820375

INCHES	6	7	8	9	10
1				.00218962	.59539933
2				.01754602	.44969758
3				.02780596	.31715150
4				.03763320	.26433858
6		.00518223	.00248967	.06255802	.13229070
8	.00124020	.01306759	.01330616	.07109425	.04553036
10	.00837644	.02144413	.00738329	.05510853	.02092215
12	.00976957	.02742680	.01348209	.03353383	.01496597

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	2.92380562	11.11046136	2.92380562	4.61271474
1	.60499999	1.46938274	4.93648550	.64908485	3.13707431
2	.42999999	.89863848	2.56394457	.14326645	2.35813712
3	.35599999	.64853571	1.64492430	.02923807	1.96740286
4	.30199999	.52792447	1.30544293	.00584760	1.80934148
6	.23099999	.40193949	.84972916		1.46644079
8	.18500000	.29841931	.54242311		.95405591
10	.14800000	.23601726	.39544655		.54263457
12	.13300000	.22998580	.34176711		.22998580

RUN NUMBER 774	HISTORIES 1000	ENERGY SET 20	ANGLE SET 04	SLANT MFP 18.050735
INC. ENERGY 1.000000	COS. THETA .342020	CUTOFF EGY .000010	INC.FLX/NT 2.923806	INC.DSE/NT 11.110461

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1				.001000	.000671	.000113
2	.029000	.019067	.002960	.043000	.026647	.004137
3	.013000	.011141	.002082	.028000	.017324	.003237
4	.014000	.008319	.001992	.050000	.037565	.008996
5	.016000	.010661	.003367	.258000	.175264	.055346
6	.007000	.003556	.001310	.003000	.001048	.000386
7	.019000	.010149	.004808	.013000	.010682	.005060
8	.007000	.004732	.002739	.008000	.005476	.003170
9	.019000	.011966	.008817	.048000	.031990	.023572
10	.009000	.005825	.005212	.371000	.297402	.266096

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.024000	.045836	.005768	.123000	.234912	.048270
2	.016000	.030558	.005398	.086000	.164247	.037870
3	.027000	.051566	.007757	.095000	.181436	.042458
4	.012000	.022918	.005324	.093000	.177616	.038006
5	.009000	.017189	.005495	.084000	.160428	.068461
6	.009000	.017189	.005121	.084000	.160428	.071288
7	.013000	.024828	.006750	.062000	.118411	.043234
8	.010000	.019099	.004257	.078000	.148969	.058279
9	.004000	.007639	.004901	.031000	.059205	.079745
10	.004000	.007639	.004647	.025000	.047746	.061230
11	.003000	.005730	.003772	.034000	.064935	.080325
12	.002000	.003820	.004382	.028000	.053476	.077702

(S+U) NO. TRAN. FACT. .133000	(S+U) DOSE TRAN. FACT. .033288	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT. .133000	SCAT.NO.FLX TRAN. FACT. .085417	SCAT. DOSE TRAN. FACT. .033288	SCAT. EGY. TRAN. FACT. .003434
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NUMBER REFL. FACT. .823000	NO. FLUX REFL. FACT. .604069	DOSE REFL. FACT. .370114	ENERGY REFL. FACT. .042341	ENERGY ABS. FACTOR .542233	NUMBER ABS. FACTOR .037000	NO. CUTOFF FACTOR .007000
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3803.405236	MEAN ENERGY SCAT.TR.NT. .025823	MEAN ENERGY REFL. NT. .051447
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RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
756	2.00000000	1.00000000	.00001010	2C

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00101059	.06822977	.06489481	.28344191	.14199170
2	.00106355	.11442654	.16058443	.53785408	.23735387
3	.00111598	.14586703	.21195842	.73298119	.27917809
4	.00953654	.19355695	.33189518	.87217545	.24641937
6	.00934890	.16744242	.36186539	.80790183	.23773685
8	.02427449	.13490132	.38489045	.64093087	.16499663
10	.02962176	.12640993	.29687125	.45579824	.15714153
12	.03096004	.12871381	.21057966	.32946813	.13707510
	.00671855	.06386382	.03267288	.12098906	.04070176
INCHES	6	7	8	9	10
1	.00405300	.07119361	.11677583	.39877090	.28552551
2	.02165997	.10558668	.21986457	.55046450	.50655811
3	.01880780	.10080260	.21942509	.56763508	.46906177
4	.03202911	.12504923	.23436076	.41088290	.30581926
6	.05521412	.15050445	.23008080	.32676051	.27016116
8	.06657291	.16705582	.18202188	.13923355	.09937050
10	.04198497	.14076498	.13005759	.05122481	.05970828
12	.01824693	.12714499	.06592593	.01281145	.03741250
	.00488085	.06957837	.01854981	.00100020	.01114911

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1				.00836307	.03787432
2			.00208431	.05320561	.07826209
3		.00346367	.00952467	.10577641	.09531741
4		.00346367	.01046384	.13060395	.10415306
6		.00934361	.04379132	.17758849	.09741184
8		.01661442	.03325812	.16683128	.06558584
10	.00104974	.04487859	.05032243	.14932206	.06067199
12	.00671855	.06386382	.03267288	.12098906	.04070176
INCHES	6	7	8	9	10
1			.00997438	.19030784	.25462761
2			.02855209	.29229171	.28414338
3	.00179406	.00598160	.04914437	.22896372	.20706595
4	.00472863	.01606288	.07546419	.18266971	.18983432
6	.00491885	.02569991	.09671770	.08407008	.08131601
8	.00681273	.03853633	.06164814	.03522748	.05248395
10	.00508311	.04815825	.03633858	.00566574	.02905054
12	.00488085	.06957837	.01854981	.00100020	.01114911

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.00000000	4.29230769	1.00000000	2.34318233
1	.79599999	1.01514723	4.14211994	.51400000	2.96941630
2	.66499999	1.00253917	3.78253131	.26399999	3.01083306
3	.56099999	.84303186	2.86549371	.13600000	2.89772478
4	.49899999	.78744424	2.50418496	.07000001	2.68701643
6	.38299999	.63885780	1.61537595	.01799999	2.02224842
8	.31399999	.48099828	1.08914567	.00399999	1.49358334
10	.26599999	.43154103	.78447157	.00100001	1.09933855
12	.21799999	.37010443	.61800205		.37010443

RUN NUMBER 756	HISTORIES 1000	ENERGY SET 2C	ANGLE SET 2541	SLANT MFP 7.978086
INC. ENERGY 2.000000	COS. THETA 1.000000	CUTOFF EGY .000010	INC.FLX/NT 1.000000	INC.DSE/NT 4.100000

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1	.002000	.007102	.001109	.001000	.001011	.000158
2	.037000	.066594	.009583	.033000	.068230	.009818
3	.022000	.033359	.006590	.040000	.064895	.012821
4	.075000	.115852	.036734	.146000	.283442	.089872
5	.027000	.040201	.017649	.066000	.141992	.062338
6	.003000	.004713	.002529	.003000	.004053	.002175
7	.034000	.078122	.053352	.037000	.071194	.048620
8	.010000	.020589	.017074	.071000	.116776	.096838
9	.001000	.001011	.000961	.185000	.398771	.379319
10	.007000	.011246	.011246	.141000	.285525	.285525

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.026000	.099312	.041728	.056000	.213904	.145219
2	.014000	.053476	.024203	.057000	.217723	.150503
3	.028000	.089127	.039096	.068000	.216450	.151992
4	.022000	.070028	.029143	.053000	.168704	.146519
5	.011000	.035014	.021676	.060000	.190985	.156200
6	.016000	.050929	.024049	.063000	.200535	.168470
7	.018000	.057296	.029276	.030000	.095493	.097127
8	.022000	.042017	.025288	.085000	.162338	.172593
9	.018000	.034377	.022885	.065000	.124141	.158669
10	.020000	.038197	.033446	.060000	.114591	.181351
11	.009000	.017189	.021205	.048000	.091673	.185524
12	.014000	.006684	.019446	.078000	.037242	.151942

(S+U) NO. TRAN.FACT. .218000	(S+U) DOSE TRAN. FACT. .156827	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT. .218000	SCAT.NO.FLX TRAN. FACT. .378790	SCAT. DOSE TRAN. FACT. .156827	SCAT. EGY. TRAN. FACT. .003377
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NUMBER REFL. FACT. .723000	NO. FLUX REFL. FACT. 1.435888	DOSE REFL. FACT. .987484	ENERGY REFL. FACT. .030129	ENERGY ABS. FACTOR .664938	NUMBER ABS. FACTOR .052000	NO. CUTOFF FACTOR .007000
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4104.102618	MEAN ENERGY SCAT.TR.NT. .030978	MEAN ENERGY REFL. NT. .083343
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RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
757	2.00000000	.86603000	.00001010	2C

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.02354843	.06192402	.03539251	.34223503	.25586451
2	.01442289	.10324124	.11436428	.59084777	.33415055
3	.01312502	.07795170	.18582804	.69683046	.32226091
4	.00277941	.10515658	.22805410	.64063991	.26293614
6	.01155990	.12431688	.24285423	.64453195	.30052820
8	.01769580	.17926542	.26563583	.59257193	.24847836
10	.03535814	.13586677	.24590797	.50421213	.14389365
12	.00358695	.09379044	.17843393	.32317399	.06815241
		.04177704	.06256373	.11244543	.04025474
INCHES	6	7	8	9	10
1	.01996252	.06225953	.12602752	.32764099	.30098798
2	.03431147	.12776121	.24499260	.50304968	.57002849
3	.06602125	.15525282	.26277097	.55572650	.50219799
4	.04550248	.22207721	.23350461	.42000244	.36463130
6	.07994792	.24693943	.20789518	.30752797	.25377590
8	.07318093	.15412952	.13088871	.17867409	.08677393
10	.06881810	.14066023	.13208276	.04842407	.03653145
12	.04558237	.14242828	.07695058	.01865202	.00543736
	.01046117	.03529873	.01449634	.00343540	.00282888

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1				.00406211	.04931171
2			.00118335	.03947525	.06417171
3			.01717485	.07880205	.06842071
4			.02601598	.12386964	.08897665
6		.01428956	.03863008	.14393047	.08433032
8		.02583074	.04438018	.16131559	.05198486
10		.02472419	.05089562	.14473452	.04701731
12	.00358695	.04177704	.06256373	.11244543	.04025474
INCHES	6	7	8	9	10
1			.00436508	.18494309	.34809825
2		.00415810	.02454189	.28352202	.34918361
3		.01477592	.06406644	.24663641	.26885554
4		.02714331	.06605811	.19042908	.18606760
6	.00505491	.03952901	.05880209	.11190774	.06880906
8	.01716545	.03976068	.07226526	.04062907	.02814344
10	.01243749	.04539891	.04587032	.01719100	.00543736
12	.01046117	.03529873	.01449634	.00343540	.00282888

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.15469441	4.95630370	1.15469441	2.60412721
1	.77899999	1.12655845	4.60587309	.53577821	3.18207393
2	.63599999	1.01449524	3.91345536	.24825930	3.08752283
3	.53799999	.87420135	3.10298882	.11546944	2.65109923
4	.45499999	.76167631	2.40296543	.05311595	2.46421303
6	.34199999	.57683018	1.47189358	.01154695	1.93270555
8	.27399999	.48378466	1.04263860	.00230939	1.47640232
10	.22999999	.39370671	.73036600		.98795952
12	.18700000	.32714841	.49148164		.32714841

RUN NUMBER 757	HISTORIES 1000	ENERGY SET 2C	ANGLE SET 0°	SLANT MFP 9.212252
INC. ENERGY 2.000000	COS. THETA .866030	CUTOFF EGY .000010	INC.FLX/NT 1.154694	INC.DSE/NT 4.734247

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1	.003000	.003022	.000472			
2	.020000	.040291	.005798	.026000	.053628	.007717
3	.034000	.056678	.011197	.026000	.030651	.006055
4	.063000	.097664	.030967	.182000	.296386	.093976
5	.027000	.037298	.016375	.114000	.221586	.097282
6	.007000	.009373	.005030	.008000	.017288	.009277
7	.019000	.037861	.025856	.031000	.053919	.036822
8	.009000	.015197	.012602	.060000	.109144	.090509
9	.003000	.003022	.002875	.155000	.283747	.269906
10	.002000	.002768	.002768	.155000	.260665	.260665

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.027000	.051566	.018989	.130000	.248281	.149220
2	.036000	.068755	.030058	.106000	.202445	.130252
3	.031000	.059205	.021018	.085000	.162338	.109772
4	.019000	.036287	.016129	.087000	.166157	.117493
5	.013000	.024828	.017196	.059000	.112681	.134984
6	.015000	.028648	.015826	.064000	.122231	.132506
7	.013000	.024828	.014852	.064000	.122231	.138452
8	.015000	.028648	.016942	.068000	.129870	.139742
9	.002000	.003820	.002816	.020000	.038197	.157250
10	.005000	.009549	.019805	.027000	.051566	.146225
11	.005000	.009549	.021762	.020000	.038197	.131694
12	.006000	.011459	.022215	.027000	.051566	.178200

(S+U) NO. TRAN.FACT. .187000	(S+U) DOSE TRAN. FACT. .113940	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT. .187000	SCAT.NO.FLX TRAN. FACT. .303175	SCAT. DOSE TRAN. FACT. .113940	SCAT. EGY. TRAN. FACT. .002540
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NUMBER REFL. FACT. .757000	NO. FLUX REFL. FACT. 1.327013	DOSE REFL. FACT. .872209	ENERGY REFL. FACT. .030314	ENERGY ABS. FACTOR .671453	NUMBER ABS. FACTOR .050000	NO. CUTOFF FACTOR .006000
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4104.105236	MEAN ENERGY SCAT.TR.NT. .027165	MEAN ENERGY REFL. NT. .080089
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RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
762	2.00000000	.70711000	.00001010	2C

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00196251	.04218900	.06061551	.28689650	.16298951
2	.01459380	.08709894	.10191577	.51671598	.25167841
3	.00717705	.10102343	.23692283	.62242414	.22019869
4	.00638456	.12408051	.30652072	.74733253	.30033385
6	.01927697	.16553143	.33444492	.68716074	.26056484
8	.01262393	.20951248	.29836293	.64614113	.18676604
10	.03230067	.17432429	.22810559	.44113141	.09710958
12	.02152373	.13241786	.09018777	.21481213	.04437142
		.04806781	.02017899	.10976569	.02298594
INCHES	6	7	8	9	10
1	.00574501	.04959302	.15152054	.39161900	.37694152
2	.04056149	.11111253	.22603738	.59062413	.58255338
3	.03289324	.13866322	.28741512	.49449057	.50533659
4	.02982519	.13614264	.29867114	.39704515	.29164862
6	.03423534	.14473152	.14528996	.23470578	.20149338
8	.04479760	.11329128	.10389168	.12108005	.05358589
10	.04633967	.12264952	.10910768	.04385333	.02678421
12	.02719094	.09225813	.07087221	.01661195	.01810038
	.00476523	.03607916	.02173992	.00444169	.00130184

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1				.00861502	.04094324
2			.00372281	.04629684	.07411615
3		.00129914	.00654874	.11431036	.10952580
4		.00265562	.00966228	.14656557	.10564697
6		.01429610	.03708256	.17808703	.07068316
8	.00151026	.02680290	.03488361	.18302139	.04400199
10	.00406085	.02920623	.04143559	.11979516	.02879459
12		.04806781	.02017899	.10976569	.02298594
INCHES	6	7	8	9	10
1			.01669123	.27561047	.35121833
2			.05654095	.26706070	.34193846
3		.01095537	.06770096	.24319826	.21246613
4	.00495875	.02355113	.04917134	.16802070	.14644578
6	.00667026	.01883006	.05829228	.09327141	.04224232
8	.01437333	.02659584	.05695382	.03824419	.01944361
10	.00870526	.03604520	.04277005	.00898446	.01036543
12	.00476523	.03607916	.02173992	.00444169	.00130184

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.41420712	6.07021212	1.41420712	2.87367412
1	.73399999	1.24461907	5.07457182	.55154079	3.07443259
2	.57899999	1.00463540	3.80482202	.21495947	2.86150436
3	.47999999	.84944298	2.82173679	.08343821	2.72142312
4	.40899999	.68920491	2.04832395	.03252675	2.25996162
6	.31099999	.52369782	1.22807550	.00424263	1.79429565
8	.25399999	.44583093	.89552967		1.32170595
10	.19899999	.33016284	.60477638		.72834652
12	.16700000	.26932628	.44124888		.26932628

RUN NUMBER 762	HISTORIES 1000	ENERGY SET 2C	ANGLE SET 0°	SLANT MFP 11.282666
INC. ENERGY 2.000000	COS. THETA .707110	CUTOFF EGY .000010	INC.FLX/NT 1.414207	INC.DSE/NT 5.798249

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO. FLX. REFL. FACTOR	DOSE REFL. FACTOR
1				.001000	.001388	.000217
2	.028000	.037513	.005398	.024000	.029832	.004293
3	.016000	.014240	.002813	.036000	.042862	.008468
4	.062000	.075770	.024025	.159000	.202867	.064324
5	.017000	.017323	.007605	.072000	.115251	.050598
6	.003000	.003133	.001681	.005000	.004062	.002180
7	.021000	.026854	.018339	.030000	.035068	.023949
8	.015000	.014913	.012367	.080000	.107142	.088849
9	.004000	.003190	.003034	.190000	.276918	.263410
10	.001000	.000873	.000873	.172000	.266539	.266539

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.033000	.063025	.018876	.124000	.236822	.112969
2	.021000	.040107	.014588	.112000	.213904	.138420
3	.021000	.040107	.015937	.087000	.166157	.100046
4	.027000	.051566	.020331	.095000	.181436	.103026
5	.013000	.024828	.011422	.056000	.106952	.111223
6	.016000	.030558	.015753	.076000	.145149	.137590
7	.014000	.026738	.010905	.065000	.124141	.112018
8	.015000	.028648	.016787	.065000	.124141	.116316
9	.003000	.005730	.004832	.023000	.043927	.152942
10				.028000	.053476	.176731
11				.019000	.036287	.105209
12	.004000	.007639	.015976	.019000	.036287	.109495
(S+U) NO. TRAN. FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT. NO. FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.167000	.076136		.167000	.193809	.076136	.002583
NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.769000	1.081929	.772826	.033769	.636471	.059000	.005000
		MEAN ENERGY SCAT. TR. NT.		MEAN ENERGY REFL. NT.		
4104.105236		.030931		.087826		

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
763	2.00000000	.34202000	.00001010	2C

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1		.06015100	.04341251	.25869547	.18256947
2		.10160727	.11254705	.43798564	.22987416
3	.00305432	.11279646	.18898534	.56610489	.24531331
4	.01195157	.14966488	.27083302	.59493975	.23524788
6	.01448418	.10970590	.28561743	.51023420	.22127971
8	.03931551	.16120089	.30452231	.49775354	.15341130
10	.01936371	.14515123	.20848287	.27862929	.08693116
12	.00106009	.08870201	.09061379	.15727275	.04448290
		.04094812	.03194766	.06297988	.03334879
INCHES	6	7	8	9	10
1	.00741451	.03049450	.12650900	.51766849	.59468448
2	.02037261	.06609865	.17130368	.65949162	.62692564
3	.03000429	.09689636	.19533061	.43296952	.32190736
4	.04736839	.12282900	.17739741	.25120676	.14098280
6	.05461589	.11877640	.23195203	.15110038	.07616922
8	.03469653	.09082884	.09583822	.04808292	.01849160
10	.03122643	.08016566	.04579580	.01884269	.01183353
12	.02580420	.04828828	.01840633	.00571121	.00122402
	.00809968	.00589189	.02070669	.00203715	

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1				.04372857	.05994281
2			.00680445	.07718506	.08215891
3			.01069596	.09141525	.10100204
4			.02154454	.11985271	.08870647
6		.00697487	.04248481	.14637198	.07052453
8		.02091040	.03530540	.09486509	.04102295
10	.00106009	.03321870	.03601721	.08073963	.03433378
12		.04094812	.03194766	.06297988	.03334879
INCHES	6	7	8	9	10
1			.02369006	.40300453	.39036781
2		.00263668	.05325369	.28611232	.23903912
3		.01620857	.07017789	.19731770	.10397964
4		.02246899	.09173949	.11621452	.06083634
6	.00282563	.02874140	.06398745	.03613172	.01219349
8	.01167654	.03414722	.03333760	.01698335	.00816163
10	.00932866	.01430727	.01738110	.00466679	.00122402
12	.00809968	.00589189	.02070669	.00203715	

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	2.92380562	12.54987337	2.92380562	4.69479073
1	.57399999	1.33883798	5.26837887	.41810420	2.84431051
2	.41799999	.80566634	2.82495167	.05847613	2.25183857
3	.34199999	.59664466	1.83263885	.00584760	2.00826908
4	.29699999	.52136306	1.42526323		1.77393535
6	.22799999	.41023587	.85441712		1.44414165
8	.17900000	.29641018	.57091428		.92642238
10	.14400000	.23227725	.35734957		.48156559
12	.12100000	.20595985	.30434509		.20595985

RUN NUMBER 783	HISTORIES 1000	ENERGY SET 2C	ANGLE SET 04	SLANT MFP 23.326373
INC. ENERGY 2.000000	COS. THETA .342020	CUTOFF EGY .000010	INC.FLX/NT 2.923806	INC.DSE/NT 11.987603

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)				
2.5400	2.5400	2.5400	2.5400	5.0800
5.0800	5.0800			5.0800

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1						
2	.021000	.015192	.002186	.034000	.020573	.002960
3	.022000	.010884	.002150	.026000	.014848	.002933
4	.037000	.021694	.006878	.139000	.088479	.028054
5	.020000	.011714	.005142	.084000	.062442	.027414
6	.005000	.003711	.001991	.005000	.002536	.001361
7	.005000	.002214	.001512	.019000	.010430	.007123
8	.009000	.006959	.005771	.061000	.043269	.035881
9	.002000	.000699	.000665	.237000	.177053	.168416
10				.229000	.203394	.203394

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.019000	.036287	.006297	.115000	.219633	.053071
2	.025000	.047746	.006614	.111000	.211994	.066506
3	.015000	.028648	.004427	.098000	.187166	.054539
4	.017000	.032468	.004363	.094000	.179526	.050697
5	.008000	.015279	.003036	.063000	.120321	.061376
6	.009000	.017189	.003286	.085000	.162338	.083506
7	.008000	.015279	.003127	.063000	.120321	.055742
8	.011000	.021008	.004777	.075000	.143239	.070259
9	.003000	.005730	.003854	.035000	.066845	.104679
10	.003000	.005730	.005456	.027000	.051566	.083598
11	.001000	.001910	.003204	.034000	.064935	.105451
12	.002000	.003820	.001781	.034000	.064935	.122603

(S+U) NO. TRAN.FACT. .121000	(S+U) DOSE TRAN. FACT. .026296	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT. .121000	SCAT.NO.FLX TRAN. FACT. .073066	SCAT. DOSE TRAN. FACT. .026296	SCAT. EGY. TRAN. FACT. .001449
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NUMBER REFL. FACT. .834000	NO. FLUX REFL. FACT. .623023	DOSE REFL. FACT. .477537	ENERGY REFL. FACT. .041026	ENERGY ABS. FACTOR .575235	NUMBER ABS. FACTOR .042000	NO. CUTOFF FACTOR .003000
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	MEAN ENERGY SCAT.TR.NT. .023950		MEAN ENERGY REFL. NT. .098384
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4104.105236

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
764	3.00000000	1.00000000	.00001010	2B

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00101059	.03728390	.05144919	.17609993	.30245021
2	.00440031	.06871001	.09108200	.36787935	.43308352
3	.01007812	.09954495	.13531597	.45113568	.60831306
4	.00989929	.11677403	.13991621	.48452534	.68421219
6	.04127542	.12609568	.18271638	.62567222	.57088317
8	.01210368	.11976727	.19844866	.48019078	.41148487
10	.02317753	.08076053	.09936104	.25004855	.21088870
12	.00358886	.03067946	.03126029	.11113287	.08039256

INCHES	6	7	8	9	10
1	.10735519	.24963381	.11373219	.27441589	.21393482
2	.20051083	.34155728	.25400233	.34887603	.44197661
3	.27093507	.39342116	.19621565	.29728165	.43127222
4	.33950305	.36820189	.22508594	.26812434	.35060740
6	.34172781	.28434152	.17989651	.16729825	.29152654
8	.27860352	.18457431	.08131681	.07310334	.13585332
10	.23504102	.08905111	.03698909	.03982795	.04755630
12	.15900020	.04783200	.03810232	.00918068	.01321019
12	.04334827	.02654563	.00754931	.00638936	.00211462

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1					.01086182
2				.00886254	.04696670
3				.01571957	.10604396
4			.00363852	.06811660	.12939459
6		.00297980	.00970953	.13068857	.11837641
8		.00708067	.02067307	.14320351	.12290119
10		.01642690	.02409142	.12037253	.08680730
12	.00358886	.03067946	.03126029	.11113287	.08039256

INCHES	6	7	8	9	10
1		.03622335	.02424386	.14583562	.27161892
2	.01520270	.11215464	.04922705	.17357900	.27739340
3	.02232784	.11978919	.05366390	.16891593	.26177626
4	.04468859	.10824986	.06696308	.09078894	.22596285
6	.07404526	.08885935	.04816216	.04527474	.10893189
8	.09000556	.05542350	.02065102	.02429932	.04441359
10	.06516404	.03435311	.01589069	.00918068	.00976536
12	.04334827	.02654563	.00754931	.00638936	.00211462

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.00000000	4.78461538	1.00000000	2.40331598
1	.80299999	.98378357	4.56546147	.49500000	3.04707827
2	.66799999	.92838604	4.05144078	.24499999	3.13851354
3	.56099999	.86923465	3.53766195	.12099999	3.10784966
4	.48699999	.79780303	2.93665316	.06000000	2.87143349
6	.37699999	.64102771	1.97797471	.01400000	1.98944657
8	.29799999	.53165143	1.34418704	.00300000	1.60488647
10	.23099999	.38205203	.85051091		.93156172
12	.19200000	.34300123	.64082134		.34300123

RUN NUMBER 764	HISTORIES 1000	ENERGY SET 28	ANGLE SET 2541	SLANT MFP 8.432459
INC. ENERGY 3.000000	COS. THETA 1.000000	CUTOFF EGY .000010	INC.FLX/NT 1.000000	INC.DSE/NT 4.600000

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)				
2.5400	2.5400	2.5400	2.5400	5.0800
5.0800	5.0800			5.0800

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1	.003000	.003587	.000499	.001000	.001011	.000141
2	.015000	.032921	.004145	.018000	.037284	.004782
3	.019000	.033003	.005811	.027000	.051449	.009060
4	.064000	.111764	.031586	.099000	.176100	.049767
5	.044000	.085599	.037217	.140000	.302450	.131500
6	.023000	.044070	.029699	.061000	.107355	.072348
7	.015000	.033975	.028805	.129000	.249634	.211646
8	.005000	.007563	.006741	.062000	.113732	.101370
9	.002000	.007102	.006484	.116000	.274416	.250554
10	.002000	.002075	.001985	.098000	.213935	.204633

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.017000	.064935	.024596	.053000	.202445	.131381
2	.023000	.087853	.038998	.059000	.225363	.145425
3	.016000	.050929	.020526	.065000	.206901	.147319
4	.021000	.066845	.031560	.059000	.187802	.132967
5	.013000	.041380	.024202	.051000	.162338	.153467
6	.018000	.057296	.033425	.054000	.171887	.160824
7	.011000	.035014	.024004	.054000	.171887	.168081
8	.013000	.024828	.017239	.092000	.175707	.184292
9	.019000	.036287	.029912	.059000	.112681	.140450
10	.014000	.026738	.019533	.072000	.137510	.213517
11	.008000	.015279	.012265	.045000	.085943	.153370
12	.019000	.009072	.025295	.088000	.042017	.172651

(S+U) NO. TRAN.FACT. .192000	(S+U) DOSE TRAN. FACT. .152973	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT. .192000	SCAT.NO.FLX TRAN. FACT. .361060	SCAT. DOSE TRAN. FACT. .152973	SCAT. EGY. TRAN. FACT. .002655
NUMBER REFL. FACT. .751000	NO. FLUX REFL. FACT. 1.527366	DOSE REFL. FACT. 1.035801	ENERGY REFL. FACT. .030070	ENERGY ABS. FACTOR .672739	NUMBER ABS. FACTOR .055000	NO. CUTOFF FACTOR .002000
4604.402618		MEAN ENERGY SCAT.TR.NT. .041489	MEAN ENERGY REFL. NT. .120119			

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
758	3.00000000	.86603000	.00001010	2B

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
	.00591501	.03049450	.04359450	.21850199	.21839151
1	.00828288	.07416677	.16542476	.37408256	.37303059
2	.01420976	.10386841	.17867352	.44617567	.50487271
3	.01250402	.11340161	.17916289	.49526239	.64323323
4	.01446958	.09232647	.14726810	.42705172	.51323324
6	.01498129	.08924362	.24113302	.53327637	.48574301
8	.00518481	.10572527	.23728726	.45283378	.40606919
10		.07640376	.12363370	.26543859	.18244697
12		.04387225	.02834096	.09101122	.09058898

INCHES	6	7	8	9	10
	.10918255	.20095402	.09058000	.27318798	.26990649
1	.19865307	.40849120	.18106955	.34280645	.51486714
2	.25774125	.44987497	.13658095	.29275300	.44328609
3	.29518652	.48235547	.18239464	.22083588	.31727095
4	.30934710	.31251155	.15614163	.16701991	.23716509
6	.27271345	.17554792	.06909138	.05296683	.07630593
8	.17577215	.12572424	.01587308	.03465183	.03210457
10	.11353345	.03860760	.01438820	.00528914	.01096355
12	.05232615	.01298161	.00547416	.00635182	.00630235

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1				.00189761	.00933889
2			.00293570	.00844233	.05281418
3		.00138402	.01123347	.02562702	.09463769
4		.00295370	.00546344	.05227486	.13223230
6		.00516363	.01146897	.11049965	.12258519
8		.00767203	.03376333	.11086641	.12695335
10		.02965792	.03452290	.12622707	.09428445
12		.04387225	.02834096	.09101122	.09058898

INCHES	6	7	8	9	10
1		.06341065	.03105321	.16562113	.32954031
2	.01361290	.16716994	.03695457	.16150557	.32979060
3	.02517196	.20760185	.05104573	.12327272	.26503438
4	.04485748	.15580230	.04832293	.10835189	.18884773
6	.06751431	.10405983	.04367920	.04388284	.06626237
8	.06915196	.06837094	.01143975	.02649664	.02465078
10	.05331984	.03166024	.00574293	.00528914	.00788882
12	.05232615	.01298161	.00547416	.00635182	.00630235

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.15469441	5.52476864	1.15469441	2.52332784
1	.78599999	1.11354612	5.14600993	.51268432	3.15355929
2	.64399999	1.00070059	4.33158552	.22747481	3.05551112
3	.55399999	.90546727	3.61799780	.10045842	3.04206600
4	.46999999	.78298501	2.86596575	.04387839	2.42041278
6	.36599995	.58319885	1.73520369	.00808286	2.01908569
8	.29899999	.48051988	1.19374956	.00115470	1.59238087
10	.23299999	.38859329	.76036968		.83070496
12	.19700000	.33724950	.63612434		.33724950

RUN NUMBER 750 HISTORIES 1000 ENERGY SET 20 ANGLE SET 0° SLANT MFP 9.736913

INC. ENERGY 3.000000 COS. THETA .866030 CUTOFF EGY .000010 INC.FLX/NT 1.154694 INC.DSE/NT 5.311594

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)
 2.5400 2.5400 2.5400 2.5400 5.0800 5.0800
 5.0800 5.0800

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1				.001000	.005123	.000713
2	.025000	.038768	.004972	.019000	.026409	.003387
3	.017000	.022458	.003955	.026000	.037754	.006648
4	.058000	.084392	.023850	.110000	.189229	.053478
5	.055000	.090093	.039171	.117000	.189134	.082232
6	.026000	.045499	.030663	.058000	.094555	.063722
7	.006000	.012359	.010478	.113000	.174032	.147549
8	.003000	.004284	.003818	.058000	.078445	.069918
9	.002000	.006191	.005653	.127000	.236589	.216016
10	.005000	.005606	.005362	.117000	.233747	.223584

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.045000	.085943	.030129	.100000	.190985	.104433
2	.023000	.043927	.019292	.102000	.194805	.137840
3	.029000	.055386	.023024	.090000	.171887	.130621
4	.022000	.042017	.017162	.112000	.213904	.154594
5	.010000	.019099	.010493	.068000	.129870	.140508
6	.015000	.028648	.020252	.065000	.124141	.154522
7	.021000	.040107	.024267	.069000	.131780	.149427
8	.015000	.028648	.020809	.061000	.116501	.134079
9	.002000	.003820	.004020	.012000	.022918	.096345
10	.006000	.011459	.027202	.028000	.053476	.185543
11	.008000	.015279	.041069	.021000	.040107	.131437
12	.001000	.001910	.006593	.018000	.034377	.136967

(S+U) NO. TRAN. FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.197000	.127922		.197000	.309650	.127922	.002674

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.746000	1.265017	.867248	.031497	.658278	.056000	.001000

MEAN ENERGY SCAT.TR.NT.	MEAN ENERGY REFL. NT.
.040726	.126662

4604.405236

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
765	3.00000000	.70711000	.00001010	2B

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00591501	.02194001	.04817048	.21045800	.19867051
2	.00223311	.04403221	.08008159	.36742939	.38216948
3	.01210067	.06660851	.09180506	.42865656	.46595637
4	.00437380	.06968996	.12620489	.55136245	.47550729
6	.02475560	.12051623	.13875105	.51487916	.43873334
8		.10524886	.18092956	.56022151	.34313511
10	.00872368	.08114700	.21963423	.45972288	.23721702
12	.02554000	.06490480	.13513100	.22603375	.15534816
	.00103399	.02678343	.02490007	.11180590	.05187102

INCHES	6	7	8	9	10
1	.12127353	.23395052	.10472051	.31597854	.25397299
2	.24487377	.38665344	.19296055	.35437084	.62991229
3	.26778713	.42171668	.20410061	.29583415	.42966143
4	.26980854	.33833836	.17761451	.18111534	.34368971
6	.29861403	.27802984	.18948088	.13222026	.20265823
8	.24664763	.14429162	.07783210	.03436604	.05564143
10	.17239910	.07683475	.04525707	.02221678	.02320620
12	.08939933	.03317526	.00920305	.01559359	.01378322
	.02799320	.01370402	.00767475	.00826065	.00488244

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1				.00189761	.01857889
2				.02516136	.07209449
3			.00374302	.04330562	.08226689
4			.00173089	.06999263	.11902854
6			.01327625	.11801267	.10185387
8		.00900201	.02100755	.11675778	.09167083
10	.01046727	.00965638	.03838349	.10417464	.07964346
12	.00103399	.02678343	.02490007	.11180590	.05187102

INCHES	6	7	8	9	10
1		.09313443	.02843112	.14992589	.39602035
2	.00812418	.12424590	.04846409	.17606663	.32183601
3	.03500655	.14294962	.06605104	.13358474	.26395727
4	.04664796	.13594873	.09288187	.10101171	.15703369
6	.08015361	.07272963	.04727098	.03027138	.05166550
8	.06046131	.04682687	.02551102	.02221678	.02063756
10	.04850702	.02349911	.00578636	.01378055	.00831324
12	.02799320	.01370402	.00767475	.00826065	.00488244

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.41420712	6.76643716	1.41420712	2.87705162
1	.72899999	1.21124493	5.56629261	.52325663	3.20797332
2	.57599999	.96973903	4.11534188	.19374638	2.87797357
3	.47999999	.84157510	3.34903625	.07071035	2.60841520
4	.42099999	.74973174	2.70610361	.02545572	2.36409436
6	.31299999	.51806231	1.46986814	.00282841	1.75114228
8	.25499999	.41409171	1.01485708		1.34635872
10	.20599999	.34221151	.69592675		.76811216
12	.16500000	.27890947	.50436700		.27890947

RUN NUMBER 765 HISTORIES 1000 ENERGY SET 20 ANGLE SET 84 SLANT MFP 11.925243

INC. ENERGY 3.000000 COS. THETA .707110 CUTOFF EGY .000010 INC.FLX/NT 1.414207 INC.DSE/NT 6.505353

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)
2.5400 2.5400 2.5400 2.5400 5.0800 5.0800

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1	.001000	.000722	.000100	.001000	.004183	.000582
2	.014000	.021261	.002727	.015000	.015514	.001990
3	.016000	.016515	.002908	.029000	.034062	.005998
4	.061000	.082767	.023391	.110000	.148817	.042057
5	.036000	.037208	.016177	.112000	.140482	.061079
6	.018000	.019162	.012913	.076000	.085754	.057791
7	.008000	.011020	.009343	.112000	.165429	.140255
8	.004000	.007680	.006845	.058000	.074049	.066000
9	.003000	.006958	.006353	.155000	.223432	.204003
10	.004000	.003340	.003195	.124000	.179587	.171779

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.031000	.059205	.015774	.130000	.248281	.125773
2	.015000	.028648	.009999	.106000	.202445	.113394
3	.024000	.045836	.018875	.102000	.194805	.118549
4	.024000	.045836	.015926	.112000	.213904	.122306
5	.012000	.022918	.012958	.053000	.101222	.101507
6	.016000	.030558	.014871	.067000	.127960	.124933
7	.018000	.034377	.019313	.073000	.139419	.129664
8	.014000	.026738	.015844	.069000	.131780	.126264
9	.002000	.003820	.004515	.018000	.034377	.111833
10	.005000	.009549	.014917	.019000	.036287	.112944
11	.004000	.007639	.017348	.025000	.047746	.140833
12				.018000	.034377	.107318

(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.165000	.083954		.165000	.206634	.083954	.002326

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.792000	1.071307	.751533	.034620	.630528	.037000	.006000

	MEAN ENERGY SCAT.TR.NT.	MEAN ENERGY REFL. NT.
4604.405236	.042294	.131136

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
766	3.00000000	.34202000	.00001010	2B

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1		.01456354	.03592804	.13980902	.17237699
2		.00782040	.10187279	.26859964	.32370103
3		.03301207	.10011749	.30906775	.34575907
4		.02276022	.10080436	.37560660	.50543353
6		.02854567	.11807997	.29535609	.47023116
8		.05354973	.15547973	.34096461	.28681947
10	.01302582	.04672689	.14927893	.29873028	.19343260
12	.00215825	.04027682	.06205692	.16619702	.11174082
		.02502313	.01955830	.10112107	.05487426
INCHES	6	7	8	9	10
1	.10961799	.30917052	.10859654	.45745752	.40438403
2	.27079799	.47223822	.19548050	.44820182	.63380607
3	.26801656	.32182632	.14062106	.26055670	.35628569
4	.33119377	.28671599	.13741305	.13919879	.17665501
6	.27209498	.20699147	.10815971	.07175202	.09349586
8	.18187075	.11313127	.05666844	.03096132	.03169644
10	.14367843	.03953050	.02549740	.00970732	.00641241
12	.06456221	.02080100	.01127600		
	.02612270	.00925242	.00334907		

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1				.00676659	.02850211
2				.01183702	.07847367
3			.00800000	.02551063	.09657891
4			.00283949	.03297399	.09904056
6			.00824271	.05694408	.10935133
8		.00485428	.01490506	.06963861	.08987198
10	.00110962	.01191731	.03142831	.09263581	.07099745
12		.02502313	.01955830	.10112107	.05487426
INCHES	6	7	8	9	10
1	.00519497	.11661024	.05335278	.25037278	.49127549
2	.02274821	.12651081	.06442403	.18312218	.30482934
3	.04146211	.14899565	.04899958	.12184691	.16184310
4	.05626347	.12079331	.04044568	.06431106	.07675068
6	.06419804	.07060392	.03031183	.01650418	.03169644
8	.07317066	.03050808	.01545094	.00970732	.00485088
10	.03823759	.01616981	.00956932		
12	.02612270	.00925242	.00334907		

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	2.92380562	13.98928537	2.92380562	4.60651256
1	.58499999	1.32632209	5.98845767	.37424710	3.09676557
2	.43799999	.83872615	3.47544134	.04678087	2.18204360
3	.37099999	.65908450	2.48085755	.00584760	2.08162893
4	.31299999	.49341825	1.70321769		1.66470692
6	.23599999	.38785253	1.10432988		1.25114176
8	.18600000	.31295781	.74329938		.92602058
10	.15400000	.27206522	.50799499		.47906903
12	.13700000	.23930094	.39452104		.23930094

RUN NUMBER 766	HISTORIES 1000	ENERGY SET 28	ANGLE SET 04	SLANT MFP 24.654871
INC. ENERGY 3.000000	COS. THETA .342020	CUTOFF EGY .000010	INC.FLX/NT 2.923806	INC.DSE/NT 13.449506

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1						
2	.013000	.009291	.001192	.007000	.004981	.000639
3	.012000	.007195	.001267	.019000	.012288	.002164
4	.049000	.034221	.009671	.076000	.047817	.013514
5	.034000	.020106	.008742	.097000	.058956	.025633
6	.019000	.010035	.006763	.057000	.037492	.025266
7	.007000	.002882	.002443	.154000	.105742	.089651
8	.003000	.001193	.001064	.056000	.037142	.033105
9				.199000	.156460	.142854
10				.160000	.138307	.132294

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.032000	.061115	.009096	.122000	.233002	.059603
2	.016000	.030558	.004552	.087000	.166157	.051519
3	.020000	.038197	.008059	.099000	.189076	.059794
4	.016000	.030558	.005383	.098000	.187166	.057947
5	.010000	.019099	.004963	.066000	.126050	.065743
6	.009000	.017189	.003684	.085000	.162338	.082439
7	.012000	.022918	.005125	.084000	.160428	.073000
8	.010000	.019099	.004425	.069000	.131780	.069533
9	.002000	.003820	.002772	.022000	.042017	.068464
10	.005000	.009549	.007559	.036000	.068755	.120448
11	.002000	.003820	.001772	.021000	.040107	.066935
12	.003000	.005730	.002083	.036000	.068755	.112888

(S+U) NO. TRAN.FACT. .137000	(S+U) DOSE TRAN. FACT. .031141	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT. .137000	SCAT.NO.FLX TRAN. FACT. .084923	SCAT. DOSE TRAN. FACT. .031141	SCAT. EGY. TRAN. FACT. .001561
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NUMBER REFL. FACT. .825000	NO. FLUX REFL. FACT. .599186	DOSE REFL. FACT. .465120	ENERGY REFL. FACT. .042034	ENERGY ABS. FACTOR .564030	NUMBER ABS. FACTOR .034000	NO. CUTOFF FACTOR .004000
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4604.405236	MEAN ENERGY SCAT.TR.NT. .034188	MEAN ENERGY REFL. NT. .152852
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RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
767	5.00000000	1.00000000	.00001010	2A

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00285980	.04649881	.05420947	.20578220	.35476729
2	.01113873	.09528787	.09630447	.44485280	.70300025
3	.02667556	.06878459	.17985095	.52252382	.74663647
4	.03810896	.07153467	.19566484	.56011830	.86015566
6	.01178403	.09446967	.25809545	.52594649	.76023958
8	.00193015	.14640102	.16182239	.42837000	.76033183
10		.11327384	.15423995	.42096766	.46926307
12	.01452097	.10848478	.13254948	.17197938	.34704321
		.02986686	.01132184	.09909224	.11532759
INCHES	6	7	8	9	10
1	.32893238	.20295578	.03842219	.01869399	.12965938
2	.60422672	.36911819	.07678685	.01563639	.40943847
3	.64070873	.31218871	.10182849	.01015416	.41383593
4	.69818337	.23442840	.06077872	.00829855	.30877409
6	.61784521	.22844206	.04404486	.00951389	.23048043
8	.39572121	.12551523	.02542751	.00452727	.11359222
10	.32372105	.06954022	.01078026		.04738025
12	.18260406	.05438242	.00296656		.01509537
	.06090023	.01481757			.00897439

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1		.00800000	.00837214	.00325313	.05828558
2		.00800000	.01343168	.02719014	.06788981
3		.00800000	.01086763	.06893678	.12793997
4		.00800000	.01917425	.06863529	.14529134
6		.01699106	.01807051	.07515066	.15653288
8		.02047710	.01543400	.08768534	.15172600
10		.02692593	.01596634	.07406327	.14139265
12		.02986686	.01132184	.09909224	.11532759
INCHES	6	7	8	9	10
1	.10816864	.10560116	.01839883	.01340483	.31702827
2	.13531540	.12704763	.04909938	.01015416	.33940927
3	.17152104	.11802000	.02996330	.00829855	.26275866
4	.16306244	.09306023	.02704312	.00441259	.19559819
6	.15373171	.07878346	.01737953	.00452727	.09152444
8	.12796080	.03192907	.00612144		.04476163
10	.10025932	.02683455	.00105393		.01509537
12	.06090023	.01481757			.00897439

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.00000000	5.76923077	1.00000000	2.29501940
1	.83299999	1.09051260	5.45690080	.45000001	3.27579074
2	.68299999	.97953746	4.49352444	.20199999	3.22518741
3	.58699999	.89730592	3.54420893	.09100000	3.12704556
4	.49999999	.76427746	2.75478278	.04000000	2.82086168
6	.38199999	.62069152	1.85939620	.00800001	2.17163884
8	.31099999	.48709539	1.20608047	.00100001	1.61016630
10	.25199999	.40159137	.87328254		1.02962624
12	.20999999	.34030071	.64979801		.34030071

RUN NUMBER	HISTORIES	ENERGY SET	ANGLE SET	SLANT MFP
767	1000	2 A	2541	9.587185
INC. ENERGY	COS. THETA	CUTOFF EGY	INC.FLX/NT	INC.DSE/NT
5.000000	1.000000	.000010	1.000000	5.800000

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1				.002000	.002860	.000316
2	.017000	.032504	.003306	.021000	.046499	.004730
3	.007000	.013887	.001939	.033000	.054209	.007571
4	.056000	.102482	.022970	.105000	.205782	.046124
5	.074000	.118446	.040843	.195000	.354767	.122334
6	.038000	.059275	.031681	.173000	.328932	.175809
7	.011000	.015124	.010430	.107000	.202956	.139969
8				.025000	.038422	.028485
9				.007000	.018694	.015149
10	.007000	.008851	.008393	.065000	.129659	.122953

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.023000	.087853	.030629	.055000	.210084	.097829
2	.018000	.068755	.029597	.063000	.240642	.124894
3	.031000	.098676	.044236	.071000	.225999	.109821
4	.016000	.050929	.026183	.054000	.171887	.103235
5	.014000	.044563	.022922	.064000	.203718	.121812
6	.009000	.028648	.013976	.061000	.194169	.124252
7	.025000	.079577	.038845	.045000	.143239	.091820
8	.024000	.045836	.021485	.082000	.156608	.115466
9	.014000	.026738	.014199	.068000	.129870	.131187
10	.015000	.028648	.025975	.066000	.126050	.128175
11	.010000	.019099	.015771	.039000	.074484	.098421
12	.011000	.005252	.008278	.065000	.031035	.087974
(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.210000	.119564		.210000	.350568	.119564	.002128
NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.733000	1.382781	.663438	.014713	.831580	.050000	.007000
5805.502618		MEAN ENERGY SCAT.TR.NT.	MEAN ENERGY REFL. NT.			
		.050675	.100362			

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
768	5.00000000	.86603000	.00001010	2A

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00123400	.04848402	.05416950	.20818899	.33513103
2	.01809692	.09076760	.15845104	.35884629	.57184325
3	.00538131	.10283196	.27301809	.42689526	.76220534
4	.01961696	.11295297	.23489335	.60414503	.71474420
6	.02032791	.17747741	.26985803	.65459412	.73677598
8	.02034077	.18269169	.27616993	.58893426	.66513876
10	.04870320	.12823683	.16600338	.37213844	.46847865
12	.00768534	.09054205	.11225114	.27421857	.31346679
		.04365987	.02432454	.10504503	.12252895

INCHES	6	7	8	9	10
1	.33644650	.22395301	.03868905	.01013303	.10808251
2	.59471337	.34600726	.06436883	.01564303	.52506112
3	.64368169	.28621430	.07910216	.01581584	.43171084
4	.73553432	.29385709	.02621969	.02285825	.28915808
6	.62811424	.17327465	.03847055	.00252758	.19218043
8	.43097819	.11872352	.00461013	.00179397	.08405206
10	.32652283	.08508648	.00394859		.04449308
12	.18448259	.01793069			.01969953
	.05468135	.00966134	.00134068		.00227556

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1			.00530670	.01428270	.05740759
2			.01750652	.04465554	.09896047
3		.00471906	.02229856	.06655531	.13804868
4		.00134876	.02217296	.09301688	.15883572
6		.01093167	.02019780	.11819907	.17586433
8		.02628467	.01635573	.09170143	.19975384
10	.00119856	.03221080	.03554137	.10890357	.14539170
12		.04365987	.02432454	.10504503	.12252895

INCHES	6	7	8	9	10
1	.08208847	.10398780	.02529512	.00895412	.42901815
2	.17203656	.11709402	.04627420	.00541774	.37910592
3	.23019788	.16695576	.01674519	.00393483	.26922034
4	.23205678	.09050635	.01815037	.00252758	.17732433
6	.18588776	.06814328	.00461013	.00179397	.07241574
8	.15298307	.03062372	.00394859		.03237240
10	.08944313	.01403613			.01321290
12	.05468135	.00966134	.00134068		.00227556

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.15469441	6.66169852	1.15469441	2.45266189
1	.81299999	1.18475433	6.06945826	.45841368	3.20221239
2	.66699999	1.06349268	4.71286952	.18244172	3.20929850
3	.58299999	.99026667	3.77954746	.07159105	3.12557100
4	.50699999	.82365240	2.76210316	.02771267	2.92131357
6	.40599999	.65150785	1.75617838	.00346409	2.37689736
8	.32199999	.55402345	1.30332822		1.64361148
10	.27099999	.43993815	.85606127		1.02027670
12	.22499999	.36351732	.62537986		.36351732

RUN NUMBER 768	HISTORIES 1000	ENERGY SET 2A	ANGLE SET 84	SLANT MFP 11.070269
INC. ENERGY 5.000000	COS. THETA .866030	CUTOFF EGY .000010	INC.FLX/NT 1.154694	INC.DSE/NT 6.697228

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1				.001000	.001069	.000118
2	.022000	.043144	.004389	.027000	.041989	.004271
3	.016000	.020516	.002865	.029000	.046912	.006552
4	.066000	.091027	.020403	.107000	.180298	.040412
5	.078000	.107085	.036926	.178000	.290234	.100081
6	.035000	.053693	.028698	.189000	.291373	.155734
7	.005000	.009844	.006789	.105000	.193950	.133759
8	.001000	.001069	.000792	.022000	.033506	.024841
9				.004000	.008775	.007111
10	.002000	.001953	.001852	.049000	.093603	.088761

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.040000	.076394	.022343	.111000	.211994	.082095
2	.042000	.080214	.027452	.098000	.187166	.097617
3	.030000	.057296	.022173	.085000	.162338	.074927
4	.038000	.072574	.022156	.112000	.213904	.102076
5	.013000	.024828	.012592	.057000	.108862	.083511
6	.016000	.030558	.015457	.058000	.110772	.096047
7	.015000	.028648	.013415	.053000	.101222	.080701
8	.017000	.032468	.017467	.064000	.122231	.106003
9	.003000	.005730	.011453	.025000	.047746	.112019
10	.005000	.009549	.015164	.019000	.036287	.082990
11	.005000	.009549	.009750	.018000	.034377	.095641
12	.001000	.001910	.006747	.011000	.021008	.059021

(S+U) NO. TRAN.FACT. .225000	(S+U) DOSE TRAN. FACT. .102714	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT. .225000	SCAT.NO.FLX TRAN. FACT. .328331	SCAT. DOSE TRAN. FACT. .102714	SCAT. EGY. TRAN. FACT. .001603
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NUMBER REFL. FACT. .711000	NO. FLUX REFL. FACT. 1.181708	DOSE REFL. FACT. .561638	ENERGY REFL. FACT. .013135	ENERGY ABS. FACTOR .852612	NUMBER ABS. FACTOR .056000	NO. CUTOFF FACTOR .008000
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5805.505236	MEAN ENERGY SCAT.TR.NT. .035628	MEAN ENERGY REFL. NT. .092370
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RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
769	5.00000000	.70711000	.00001010	2A

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1		.04221652	.05439702	.16662150	.34924200
2		.05439514	.15707369	.35186623	.64784036
3		.07664399	.20583278	.59838008	.71714773
4		.08026536	.19314203	.54217481	.74733927
6		.07821473	.17369193	.47531185	.75158477
8		.09216828	.18685131	.44110155	.47733915
10	.00719917	.10311915	.13812786	.32503009	.43235695
12		.06859236	.09675078	.26595438	.27653492
		.03249439	.02299199	.08162599	.09599605
INCHES	6	7	8	9	10
1	.39488599	.24953399	.05575850	.00566451	.20627251
2	.67531637	.32479919	.07394043	.02907734	.55045798
3	.69470069	.37977093	.05865623	.03180216	.48715748
4	.62169404	.25617403	.03736069	.01405520	.25897561
6	.52999730	.17521226	.04107399	.00632413	.12789846
8	.28031053	.06392452	.00789548	.00325228	.03636837
10	.20052694	.03675955	.00382185		.01197106
12	.07866177	.01674940	.00286880		.00492772
	.03065672	.00493523	.00245688		.00205550

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1			.00941481	.02660536	.05252972
2		.00297618	.00756168	.06516633	.09831755
3		.00638080	.03033475	.06545259	.11964719
4		.00638080	.02451280	.08057788	.17322033
6		.01058559	.01571193	.10565419	.12676568
8		.01833982	.02123442	.09653053	.13590954
10		.01293935	.01952731	.11073729	.11287479
12		.03249439	.02299199	.08162599	.09599605
INCHES	6	7	8	9	10
1	.14816559	.10636586	.02632935	.00829394	.45200512
2	.17654353	.17775428	.02964597	.00661456	.38450949
3	.19751877	.12853767	.01973662	.01180338	.22584237
4	.18028900	.08222124	.01263196	.00517093	.10700799
6	.14909339	.04691425	.00683382	.00325228	.03179638
8	.09729185	.02664914	.00382185		.01197106
10	.04922696	.01373037	.00286880		.00492772
12	.03065672	.00493523	.00245688		.00205550

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.41420712	8.15888725	1.41420712	2.88838704
1	.74099999	1.28649866	6.43023023	.45678891	3.32155562
2	.59799999	1.09616710	4.76078391	.14707753	3.39716959
3	.49099999	.85192298	3.16006712	.04666883	2.79784988
4	.40699999	.68615500	2.11070044	.01414208	2.37345150
6	.30599999	.49802171	1.25643027	.00141422	1.59062568
8	.23499999	.41174819	.87872477		1.25891262
10	.19300000	.32683259	.61143797		.81104012
12	.16300000	.27321277	.44949085		.27321277

RUN NUMBER 769	HISTORIES 1000	ENERGY SET 2A	ANGLE SET 0φ	SLANT MFP 13.558265
INC. ENERGY 5.000000	COS. THETA .707110	CUTOFF EGY .000010	INC.FLX/NT 1.414207	INC.DSE/NT 8.202401

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL. FACTOR	DOSE REFL. FACTOR
1						
2	.016000	.025866	.002631	.022000	.029852	.003037
3	.013000	.016113	.002250	.035000	.038465	.005372
4	.050000	.061462	.013776	.093000	.117820	.026408
5	.058000	.068893	.023756	.187000	.246952	.085156
6	.018000	.023786	.012713	.215000	.279228	.149242
7	.004000	.003340	.002303	.115000	.176448	.121688
8	.002000	.001595	.001182	.028000	.039427	.029231
9				.004000	.004005	.003246
10	.002000	.001445	.001370	.093000	.145857	.138313

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.041000	.078304	.018433	.115000	.219633	.075119
2	.028000	.053476	.016898	.112000	.213904	.090585
3	.019000	.036287	.009531	.088000	.168067	.071308
4	.022000	.042017	.011326	.110000	.210084	.086152
5	.006000	.011459	.005026	.076000	.145149	.106040
6	.013000	.024828	.010597	.088000	.168067	.119392
7	.007000	.013369	.005113	.060000	.114591	.085399
8	.013000	.024828	.007361	.066000	.126050	.092665
9	.002000	.003820	.002603	.021000	.040107	.084288
10	.006000	.011459	.015439	.018000	.034377	.074923
11	.004000	.007639	.008663	.021000	.040107	.101779
12	.002000	.003820	.003567	.017000	.032468	.085101

(S+U) NO. TRAN.FACT. .163000	(S+U) DOSE TRAN. FACT. .059982	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT. .163000	SCAT.NO.FLX TRAN. FACT. .202499	SCAT. DOSE TRAN. FACT. .059982	SCAT. EGY. TRAN. FACT. .001137
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NUMBER REFL. FACT. .792000	NO. FLUX REFL. FACT. 1.078055	DOSE REFL. FACT. .561692	ENERGY REFL. FACT. .018283	ENERGY ABS. FACTOR .805796	NUMBER ABS. FACTOR .040000	NO. CUTOFF FACTOR .005000
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5805.505236	MEAN ENERGY SCAT.TR.NT. .034877	MEAN ENERGY REFL. NT. .115421
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RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
770	5.00000000	.34202000	.00001010	2A

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1		.03156751	.03390354	.22969902	.34695850
2		.03792648	.07524232	.36204632	.55027982
3		.06550614	.20560061	.44650226	.54735005
4		.05659998	.13809063	.46167011	.53910450
6		.04131731	.13394331	.33061732	.48370619
8		.03764510	.11670057	.26170037	.38467241
10		.02949256	.09334322	.20720086	.30690514
12		.05028880	.04591400	.13292847	.18824032
		.02445505	.01323482	.04051711	.06389474
INCHES	6	7	8	9	10
1	.44226999	.27229002	.05562501	.02220104	.52437150
2	.58722840	.31012912	.06565720	.03715260	.63003158
3	.53461541	.23023983	.05887491	.01647535	.28505216
4	.49417383	.19905026	.05059645	.01074981	.15251909
6	.38666452	.13714256	.02059262	.00503545	.06352626
8	.28727518	.07228731	.00839033	.00128776	.01676161
10	.14339480	.04956187	.00380102	.00108424	.00445809
12	.07186556	.00931896		.00104135	.00164516
	.02032634	.00433537			.00800000

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1			.00403232	.03897892	.07639761
2			.00573270	.05999240	.12426881
3		.00293827	.00971600	.08550742	.08219437
4		.00293827	.01081297	.07392458	.09952990
6		.00953138	.00984233	.05445343	.10466012
8		.00874698	.01835710	.06557788	.09637690
10		.01323805	.01617802	.05166195	.09424907
12		.02445505	.01323482	.04051711	.06389474
INCHES	6	7	8	9	10
1	.17645621	.15177412	.04334300	.01835155	.51994433
2	.21566684	.14743273	.03305010	.01052608	.24998639
3	.16813780	.10409392	.02600349	.00540181	.11490853
4	.17383232	.09945829	.00949293	.00385102	.05324466
6	.12374547	.04612311	.00560780	.00128776	.01676161
8	.05984291	.02675104		.00108424	.00445809
10	.03801182	.00931896		.00104135	.00164516
12	.02032634	.00433537			.00800000

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
1	1.00000000	2.92380562	16.86810937	2.92380562	4.77722370
2	.56199999	1.30996340	6.25417662	.28068535	2.93637918
3	.42899999	.87297030	3.36632686	.02631424	2.41653099
4	.35199999	.59890161	1.99782689		2.10255467
6	.29499999	.52708496	1.58273100		1.60254553
8	.22099999	.37201301	.95096484		1.18672065
10	.16700000	.28119513	.60687130		.83924180
12	.13400000	.22534439	.42261065		.50124263
	.10900000	.17476343	.31347938		.17476343

RUN NUMBER	HISTORIES	ENERGY SET	ANGLE SET	SLANT MFP
770	1000	2A	04	28.031066
INC. ENERGY	COS. THETA	CUTOFF EGY	INC.FLX/NT	INC.DSE/NT
5.000000	.342020	.000010	2.923806	16.958073

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1						
2	.012000	.007019	.000714	.018000	.010797	.001098
3	.009000	.004473	.000625	.021000	.011596	.001619
4	.028000	.013447	.003014	.119000	.078562	.017609
5	.043000	.021338	.007358	.166000	.118667	.040920
6	.013000	.006587	.003521	.193000	.151265	.080849
7	.003000	.001443	.000995	.132000	.093129	.064227
8				.024000	.019025	.014105
9				.011000	.007593	.006153
10	.001000	.002023	.001918	.168000	.179346	.170069

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.020000	.038197	.004221	.088000	.168067	.026360
2	.020000	.038197	.004836	.094000	.179526	.034383
3	.020000	.038197	.004404	.097000	.185256	.040877
4	.018000	.034377	.004418	.110000	.210084	.047833
5	.007000	.013369	.001901	.075000	.143239	.049197
6	.006000	.011459	.002234	.074000	.141329	.054833
7	.005000	.009549	.002433	.068000	.129870	.050545
8	.010000	.019099	.004816	.097000	.185256	.074267
9				.028000	.053476	.064018
10				.023000	.043927	.041309
11	.001000	.001910	.000393	.027000	.051566	.061820
12	.002000	.003820	.004996	.071000	.135600	.212099

(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.109000	.018145		.109000	.056330	.018145	.000736

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.852000	.669978	.396648	.026058	.732047	.039000	

	MEAN ENERGY SCAT.TR.NT.	MEAN ENERGY REFL. NT.
5805.505236	.033786	.152922

RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
771	14.00000000	1.00000000	.00001010	2

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00159760	.04113350	.04586487	.19740268	.25026702
2		.05298757	.11247621	.28433183	.48367759
3	.00113347	.07073573	.14111747	.43692535	.51401739
4		.10976250	.23711472	.49530178	.60240364
6		.13383324	.23083773	.44768929	.70699721
8		.09837670	.27392050	.50170202	.61013844
10		.07435901	.14867724	.36146309	.45027071
12		.09573980	.07931562	.26953884	.33847839
		.03813085	.02303235	.07510764	.11427407
INCHES	6	7	8	9	10
1	.26106469	.25814641	.05051599	.04235810	.05248370
2	.45086570	.37593942	.11630975	.06705686	.24772184
3	.52612038	.36248127	.09751029	.07859219	.24805346
4	.54450290	.26566639	.12858467	.04297342	.26797909
6	.49553411	.26647099	.08285718	.04247739	.23156856
8	.35547316	.21957508	.04006245	.02767062	.13256567
10	.25368308	.12310348	.02737505	.02258516	.07110284
12	.19636417	.08391265	.01333262	.00501047	.03926592
	.08559100	.02058292	.00217243	.00276098	.02153086

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1				.00102149	.02867276
2			.00128698	.01367349	.03496948
3			.00221477	.03032877	.06894196
4			.00768831	.04097908	.09214081
6		.00386758	.03046013	.08874308	.13821947
8		.02016580	.02873663	.08380687	.12845943
10		.02418351	.01796935	.08271951	.14194477
12		.03813085	.02303235	.07510764	.11427407
INCHES	6	7	8	9	10
1	.05219019	.06347598	.02955476	.02489185	.19786691
2	.11483060	.09470529	.04346906	.04263238	.23401139
3	.14098704	.09462424	.04422905	.03261584	.24130626
4	.13530540	.12707543	.04422563	.03159281	.21370664
6	.11599264	.12270237	.02531701	.01131750	.12454521
8	.11422879	.06603555	.01359777	.01608289	.07009953
10	.09500495	.06244719	.00604739	.00501047	.03926592
12	.08559100	.02058292	.00217243	.00276098	.02153086

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.00000000	7.00000000	1.00000000	2.10954322
1	.83799999	.97967395	6.17942380	.58199999	2.77336679
2	.71799999	.91857869	5.23526431	.33900000	2.81568700
3	.61699999	.85224794	4.39456759	.19700001	2.89128911
4	.54399999	.80771413	3.81459924	.11500000	2.75326571
6	.43299999	.69916500	2.56314299	.03800000	2.29748464
8	.35099999	.55421327	1.71363011	.01300001	1.54561966
10	.28199999	.47859306	1.29068856	.00399999	1.12495850
12	.23299999	.38418309	.86755132	.00100001	.38418309

RUN NUMBER 771	HISTORIES 1000	ENERGY SET 2	ANGLE SET 2541	SLANT MFP 6.490434
INC. ENERGY 14.000000	COS. THETA 1.000000	CUTOFF EGY .000010	INC.FLX/NT 1.000000	INC.DSE/NT 7.000000

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1				.001000	.001598	.000146
2	.019000	.042675	.003597	.022000	.041133	.003467
3	.013000	.023083	.002671	.029000	.045865	.005307
4	.048000	.079869	.014833	.099000	.197403	.036660
5	.066000	.114754	.032787	.138000	.250267	.071505
6	.052000	.090180	.039937	.133000	.261065	.115614
7	.013000	.020350	.011628	.128000	.258146	.147512
8	.002000	.002184	.001342	.027000	.050516	.031031
9	.002000	.002854	.002079	.018000	.042358	.030861
10	.017000	.021565	.020949	.027000	.052484	.050984

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.024000	.091673	.035459	.045000	.171887	.072351
2	.023000	.087853	.039855	.066000	.252101	.113430
3	.025000	.079577	.029931	.064000	.203718	.081977
4	.009000	.028648	.011981	.060000	.190985	.088555
5	.032000	.101859	.050439	.036000	.114591	.061643
6	.023000	.073211	.028301	.050000	.159155	.089093
7	.013000	.041380	.019440	.040000	.127324	.072479
8	.023000	.043927	.026903	.056000	.106952	.069423
9	.013000	.024828	.013776	.059000	.112681	.081789
10	.017000	.032468	.027004	.042000	.080214	.072825
11	.017000	.032468	.020349	.041000	.078304	.076455
12	.013000	.006207	.009550	.063000	.030080	.078024

(S+U) NO. TRAN.FACT. .233000	(S+U) DOSE TRAN. FACT. .130823	UNSCAT. NO. FACTOR .001000	SCAT. NO. TRAN. FACT. .232000	SCAT.NO.FLX TRAN. FACT. .397515	SCAT. DOSE TRAN. FACT. .129823	SCAT. EGY. TRAN. FACT. .002335
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NUMBER REFL. FACT. .622000	NO. FLUX REFL. FACT. 1.200835	DOSE REFL. FACT. .493089	ENERGY REFL. FACT. .005735	ENERGY ABS. FACTOR .918288	NUMBER ABS. FACTOR .141000	NO. CUTOFF FACTOR .004000
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7006.802618	MEAN ENERGY SCAT.TR.NT. .140934	MEAN ENERGY REFL. NT. .129092
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RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
759	14.00000000	.86603000	.00001010	2

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00319651	.05772301	.06662800	.16153650	.23074950
2	.00680378	.05926722	.09169074	.32174034	.42320579
3	.01248254	.07943527	.13541540	.44874804	.58169400
4	.01584792	.17688757	.21253176	.46503659	.67921120
6	.00122313	.17414173	.21571755	.45209032	.60836615
8	.01882284	.07887519	.23654537	.43990913	.55114355
10		.06328919	.16040794	.34801137	.48751890
12		.04051683	.09559679	.25764515	.31735278
		.02952135	.01990652	.10251814	.11231776
INCHES	6	7	8	9	10
1	.33009648	.19616849	.07073004	.04510948	.06555003
2	.55269552	.38525001	.15856786	.06311996	.29165489
3	.60577600	.41611957	.10856043	.04620147	.29908065
4	.65560535	.33248389	.10040545	.04817780	.25958915
6	.58258205	.21102892	.05264577	.04505286	.18420473
8	.37848228	.18579579	.04734222	.02421281	.10808158
10	.30560202	.08490787	.01618714	.00859140	.04791734
12	.15378704	.04806904	.01540347	.00105152	.03227740
	.06140324	.02832912	.00340661	.00311675	.00651748

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1		.00144894	.00138635	.00865567	.02504166
2			.00624748	.04564773	.05590337
3			.00380627	.06837278	.10395031
4		.00343325	.01315247	.07572166	.11109641
6		.00379956	.02554993	.07354511	.13052452
8		.01254319	.02834843	.08478296	.15261183
10		.01638251	.02355011	.09192575	.12626752
12		.02952135	.01990652	.10251814	.11231776
INCHES	6	7	8	9	10
1	.09331661	.09238708	.03739754	.03355181	.23939678
2	.11551444	.14781683	.05225850	.01646764	.25372909
3	.16066379	.15130646	.03117032	.02822943	.22807431
4	.16862649	.10180259	.02594094	.03721217	.17098300
6	.17464923	.10067765	.02064109	.01038654	.10161345
8	.15053646	.04602774	.01164100	.00673329	.04673570
10	.10219574	.02668966	.00850469	.00105152	.03109576
12	.06140324	.02832912	.00340661	.00311675	.00651748

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	1.15469441	8.08286087	1.15469441	2.34123876
1	.84299999	1.15149866	7.07635115	.61891621	2.97291231
2	.69399999	1.02498236	5.53891105	.33139730	3.06491067
3	.57699999	.95224191	4.49842017	.17666825	3.12244492
4	.50199999	.80265392	3.41557741	.09468495	2.62173816
6	.40599999	.66794505	2.33191133	.02655796	2.09576873
8	.31599999	.54688878	1.52294475	.00692816	1.52936134
10	.26099999	.42881796	1.04868848	.00115470	.96295472
12	.22299999	.36703697	.74970738		.36703697

RUN NUMBER 759	HISTORIES 1000	ENERGY SET 2	ANGLE SET 04	SLANT MFP 7.494468
INC. ENERGY 14.000000	COS. THETA .866030	CUTOFF EGY .000010	INC.FLX/NT 1.154694	INC.DSE/NT 8.082861

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1				.002000	.002768	.000253
2	.014000	.024410	.002057	.022000	.049990	.004213
3	.016000	.016626	.001924	.037000	.057702	.006677
4	.061000	.095159	.017672	.091000	.139895	.025981
5	.069000	.102178	.029194	.123000	.199836	.057096
6	.040000	.053084	.023508	.165000	.285873	.126601
7	.014000	.024857	.014204	.112000	.169888	.097079
8	.003000	.002838	.001743	.036000	.061254	.037628
9	.002000	.002768	.002017	.024000	.039066	.028462
10	.004000	.005168	.005021	.035000	.056768	.055146

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.042000	.080214	.023226	.111000	.211994	.071512
2	.038000	.072574	.023801	.081000	.154698	.069689
3	.034000	.064935	.020527	.080000	.152788	.072451
4	.032000	.061115	.015133	.090000	.171887	.072171
5	.021000	.040107	.022351	.049000	.093583	.066449
6	.018000	.034377	.019374	.054000	.103132	.075844
7	.015000	.028648	.011268	.058000	.110772	.086199
8	.009000	.017189	.012798	.062000	.118411	.088202
9	.003000	.005730	.006415	.016000	.030558	.057275
10	.003000	.005730	.006429	.014000	.026738	.055052
11	.004000	.007639	.013557	.014000	.026738	.044319
12	.004000	.007639	.011027	.018000	.034377	.079525

(S+U) NO. TRAN.FACT. .223000	(S+U) DOSE TRAN. FACT. .097341	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT. .223000	SCAT.NO.FLX TRAN. FACT. .327088	SCAT. DOSE TRAN. FACT. .097341	SCAT. EGY. TRAN. FACT. .001073
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NUMBER REFL. FACT. .647000	NO. FLUX REFL. FACT. 1.063041	DOSE REFL. FACT. .439136	ENERGY REFL. FACT. .006647	ENERGY ABS. FACTOR .922794	NUMBER ABS. FACTOR .124000	NO. CUTOFF FACTOR .006000
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7006.805236	MEAN ENERGY SCAT.TR.NT. .067389	MEAN ENERGY REFL. NT. .143827
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RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
772	14.00000000	.70711000	.00001010	2

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
1	.00196251	.03589354	.04983303	.18773448	.28240253
2	.00482247	.05699280	.11217132	.31373053	.51878924
3	.00926689	.07291973	.12966068	.35343178	.60388880
4	.01990739	.13947149	.18585398	.39445835	.61038442
6	.04699106	.11934729	.22546819	.51157245	.65482701
8	.05056956	.11943383	.24094298	.44573493	.51600208
10	.00237916	.10579864	.13088310	.28072702	.38536037
12	.00104974	.08808737	.12263871	.18812384	.27091591
	.00121226	.03978276	.01345881	.07077560	.08138280

INCHES	6	7	8	9	10
1	.33921649	.26173149	.08690100	.04735601	.06930053
2	.63963127	.43948555	.18922921	.07111310	.36442620
3	.64415713	.36722600	.12800296	.10055228	.33646549
4	.64914632	.37440844	.09501329	.09953999	.26278396
6	.55464698	.29770869	.07728760	.04838833	.16950499
8	.41055646	.13255886	.02266906	.02685827	.07780939
10	.32436527	.10398541	.01593616	.00660496	.04686899
12	.20704970	.02582633	.00528969	.01297312	.01657820
	.06001190	.00695277	.00390330	.00109739	.01764683

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
1			.00177770	.01350241	.03720901
2			.00471900	.02657135	.04141298
3			.00553132	.03009840	.07319817
4		.00139590	.00748210	.07385107	.08731925
6		.00515652	.02858911	.10197880	.10810179
8		.00880549	.02703050	.06963351	.10371476
10		.03355921	.02423541	.07079724	.09679586
12	.00121226	.03978276	.01345881	.07077560	.08138280

INCHES	6	7	8	9	10
1	.07429358	.11751449	.09169662	.03003803	.28756065
2	.13035371	.14836058	.07848441	.04592336	.28407790
3	.16307520	.16483245	.05621748	.05435850	.22950988
4	.16042037	.17509072	.03230692	.03840727	.15393099
6	.15800733	.07431376	.01726452	.01672666	.06887974
8	.13655805	.05000744	.00679353	.00660496	.03235976
10	.10513714	.01266824	.00361922	.00244993	.01657820
12	.06001190	.00695277	.00390330	.00109739	.01764683

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
1	.33199999	.65359250	3.36925238	.65760630	1.28242575
2	.43299999	.75990328	3.67695291	.30546875	2.71039171
3	.44599999	.77682140	3.47709274	.14142071	2.74557174
4	.41199999	.73020459	2.87654159	.06505353	2.83096765
6	.33799999	.57901823	1.78343031	.01414208	2.70574260
8	.26299999	.44150801	1.21451833	.00282841	2.04313543
10	.21899999	.36584045	.82351221		1.40290909
12	.17800000	.29622441	.63968205		.93853263
					.29622441

RUN NUMBER 772	HISTORIES 1000	ENERGY SET 2	ANGLE SET 00	SLANT MFP 9.178818
INC. ENERGY 14.000000	COS. THETA .707110	CUTOFF EGY .000010	INC.FLX/NT 1.414207	INC.DSE/NT 9.899450

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN. FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1	.001000	.000873	.000080	.001000	.001388	.000127
2	.022000	.024910	.002100	.020000	.025381	.002139
3	.008000	.008741	.001011	.028000	.035237	.004077
4	.046000	.058208	.010810	.099000	.132749	.024653
5	.049000	.060606	.017316	.154000	.199690	.057054
6	.036000	.041982	.018592	.161000	.239863	.106225
7	.005000	.005243	.002996	.127000	.185073	.105756
8	.003000	.002832	.001740	.046000	.061449	.037747
9	.001000	.000873	.000636	.032000	.033486	.024397
10	.007000	.011328	.011005	.034000	.049003	.047603

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.040000	.076394	.015813	.114000	.217723	.064202
2	.018000	.034377	.008642	.095000	.181436	.065355
3	.029000	.055386	.013860	.106000	.202445	.071714
4	.022000	.042017	.010970	.096000	.183346	.069802
5	.016000	.030558	.011589	.052000	.099312	.061680
6	.012000	.022918	.012263	.049000	.093583	.056285
7	.018000	.034377	.015171	.057000	.108862	.059405
8	.012000	.022918	.009995	.055000	.105042	.065205
9				.022000	.042017	.076583
10	.004000	.007639	.005923	.017000	.032468	.053954
11	.002000	.003820	.003766	.016000	.030558	.059351
12	.005000	.009549	.018601	.023000	.043927	.079082

(S+U) NO. TRAN.FACT. .178000	(S+U) DOSE TRAN. FACT. .066285	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT. .178000	SCAT.NO.FLX TRAN. FACT. .215595	SCAT. DOSE TRAN. FACT. .066285	SCAT. EGY. TRAN. FACT. .011704
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NUMBER REFL. FACT. .702000	NO. FLUX REFL. FACT. .963318	DOSE REFL. FACT. .409779	ENERGY REFL. FACT. .070694	ENERGY ABS. FACTOR .917598	NUMBER ABS. FACTOR .119000	NO. CUTOFF FACTOR .001000
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7006.805236	MEAN ENERGY SCAT.TR.NT. .920548	MEAN ENERGY REFL. NT. 1.409854
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RUN NUMBER	INC.ENERGY	COS. THETA	CUTOFF EGY.	ENERGY SET
773	14.00000000	.34202000	.00001010	2

SLAB CONFIGURATION IRON

SCATTERED FLUX PER NEUTRON AT REGION BDS. IN ENERGY GRPS.					
INCHES	1	2	3	4	5
		.01854152	.03785603	.16452352	.27982451
1		.02580867	.08902779	.22073386	.40072752
2		.02840981	.13885465	.31132309	.47166290
3		.05334753	.14718971	.35433126	.47696695
4		.04989360	.18710815	.36799338	.49793607
6	.02433509	.08247823	.14989657	.29938503	.38011601
8	.01941851	.06637582	.09268378	.20225626	.22323321
10		.05612216	.04293605	.11185508	.18265280
12		.02861782	.01633687	.05506143	.07426183
INCHES	6	7	8	9	10
	.33425551	.35774399	.08584148	.07871549	.18147099
1	.58991892	.46771549	.14252533	.06472421	.43603634
2	.56473043	.30832848	.09331214	.05802143	.23169344
3	.60273244	.20597278	.09957654	.03133173	.12028257
4	.36924214	.18384373	.06318443	.03916679	.08317889
6	.26740060	.07720292	.02330416	.00847046	.01296877
8	.19925134	.04121168	.01516462	.01476280	.00865716
10	.12187372	.03748419	.00795017	.00123367	.00256577
12	.04874155	.00580868	.00125193		.00103419

SCATTERED FLUX TRANS. PER NT. IN EGY. GRPS. VS. THICKNESS					
INCHES	1	2	3	4	5
		.00144894	.00181646	.01743973	.03690651
1			.00584553	.04067261	.06234252
2			.02291366	.04240693	.08701166
3				.04764583	.08911297
4		.00128806	.01967397	.05670489	.10455254
6		.00236930	.01817257	.06205306	.07747563
8		.01938519	.02828966	.06230594	.07384448
10		.02517447	.01314791	.05506143	.07426183
12		.02861782	.01633687		
INCHES	6	7	8	9	10
	.13724143	.19214170	.09816298	.03611842	.37196791
1	.18315014	.14486177	.06160631	.05060964	.21406052
2	.18797089	.10417906	.06361275	.02565938	.11202279
3	.14319207	.08206846	.03781776	.02616704	.08317889
4	.12352358	.05837800	.01950763	.00682887	.01296877
6	.09237449	.02274948	.00797624	.00809140	.00865716
8	.06241833	.01615541	.00795017	.00123367	.00256577
10	.04874155	.00580868	.00125193		.00103419
12					

INCHES	TOTAL NO. TRANS./NT.	TOTAL FLUX TRANS./NT.	TOTAL DOSE TRANS./NT.	UNC.NO.FLUX TRANS./NT.	TTL.FLX/NT. REGION BDS.
	1.00000000	2.92380562	20.46663937	2.92380562	4.42555603
1	.60799999	1.49262425	8.72175567	.59938014	3.03659828
2	.43999999	.88594887	4.21674569	.12279981	2.32913622
3	.35699999	.66916758	2.60725855	.02339046	2.11512196
4	.31599999	.53306886	1.92011241	.00292383	1.84447098
6	.23899999	.40300616	1.09247821		1.32555865
8	.18900000	.32705232	.76081529		.88301519
10	.16200000	.26479615	.54680750		.56467361
12	.13100000	.23111431	.40875745		.23111431

RUN NUMBER	HISTORIES	ENERGY SET	ANGLE SET	SLANT MFP
773	1000	2	04	18.9767673
INC. ENERGY	COS. THETA	CUTOFF EGY	INC.FLX/NT	INC.DSE/NT
14.0000000	.3420200	.0000101	2.9238056	20.4666392

SLAB CONFIGURATION IRON

REGION THICKNESSES (CENTIMETERS)					
2.5400	2.5400	2.5400	2.5400	5.0800	5.0800
5.0800	5.0800				

NUMBER OF SCATTERED NEUTRONS VS. ENERGY

ENERGY GROUPS	NO. TRAN. FACTOR	NO. FLUX TRAN.FACTOR	DOSE TRAN. FACTOR	NO. REFL. FACTOR	NO.FLX.REFL FACTOR	DOSE REFL. FACTOR
1						
2	.0130000	.0098618	.0008312	.0120000	.0063416	.0005345
3	.0110000	.0056704	.0006561	.0210000	.0129475	.0014982
4	.0300000	.0199562	.0037061	.0950000	.0562703	.0104502
5	.0450000	.0258820	.0073949	.1400000	.0957056	.0273444
6	.0260000	.0163763	.0072523	.1730000	.1143221	.0506284
7	.0040000	.0021139	.0012079	.1560000	.1223556	.0699175
8	.0010000	.0004221	.0002593	.0480000	.0293595	.0180351
9				.0370000	.0269223	.0196148
10	.0010000	.0003494	.0003394	.0600000	.0620667	.0602934

NUMBER OF SCATTERED NEUTRONS VS. ANGLE

ANGULAR SECTORS	NO. TRAN. FACTOR	NO. TRAN. FACT/STER	DOSE TRAN. FACT/STER	NO. REFL. FACTOR	NO. REFL. FACT/STER	DOSE REFL. FACT/STER
1	.0190000	.0362872	.0042151	.1030000	.1967151	.0301045
2	.0210000	.0401070	.0051115	.0900000	.1718869	.0293417
3	.0230000	.0439266	.0045588	.0850000	.1623377	.0294822
4	.0150000	.0286478	.0030861	.0940000	.1795264	.0353307
5	.0100000	.0190986	.0045783	.0640000	.1222307	.0419921
6	.0130000	.0248281	.0047431	.0630000	.1203209	.0349214
7	.0100000	.0190986	.0027268	.0660000	.1260504	.0382214
8	.0100000	.0190986	.0027854	.0820000	.1566081	.0462389
9	.0010000	.0019099	.0011039	.0250000	.0477464	.0401331
10	.0040000	.0076394	.0032566	.0190000	.0362872	.0420042
11	.0020000	.0038197	.0028150	.0180000	.0343774	.0353863
12	.0030000	.0057296	.0023624	.0330000	.0630252	.0901905

(S+U) NO. TRAN.FACT.	(S+U) DOSE TRAN. FACT.	UNSCAT. NO. FACTOR	SCAT. NO. TRAN. FACT.	SCAT.NO.FLX TRAN. FACT.	SCAT. DOSE TRAN. FACT.	SCAT. EGY. TRAN. FACT.
.1310000	.0216472		.1310000	.0806319	.0216472	.0004256

NUMBER REFL. FACT.	NO. FLUX REFL. FACT.	DOSE REFL. FACT.	ENERGY REFL. FACT.	ENERGY ABS. FACTOR	NUMBER ABS. FACTOR	NO. CUTOFF FACTOR
.7420000	.5262912	.2583165	.0100741	.8949982	.1270000	

	MEAN ENERGY SCAT.TR.NT.	MEAN ENERGY REFL. NT.
70.06805236	.0454886	.1900775

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